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To consider and take action upon all general questions relating to the navigation and carrying business of the Great Lakes, maintain necessary shipping offices and in general to protect the common interest of Lake Carriers, and improve the character of the service rendered to the public.

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TO HELP THE MERCHANT MARINE.

The proposed ten per cent discriminating duty in favor of American shipping in American vessels is supposed to be the key to the whole solution regarding the upbuilding of our merchant marine.

Senator Foraker, of Ohio, is conspicuous in his advocacy of this policy, and he is seconded by Senator Elkins, of West Virginia, and the matter will undoubtedly be pressed in the coming session of Congress.

It is stoutly contended that the ship-builders on the great lakes, as well as those on the sea coast, would come in for the benefits of the revival; that a certain class of vessels for the ocean carrying trade can be constructed in the lake shipyards and delivered to the seaboard in sections advantageously. Opinions may differ as to the practicability of the plan, but intelligent opinions decide that it would be both practical and profitable. The lake ship-builders represent a great industry, and there is no question that its interests would be greatly enhanced by the adoption of a policy that would bring about the re-establishment of an American merchant marine on a scale commensurate with the country's needs.

The strongest advocates of the ten per cent measure say that in the thirty-two years which have passed since the close of the civil war, we have paid out enough money for ocean freights to build a vast merchant navy, and that it is now time to abandon the policy of inaction, and to adopt a policy which will create a merchant marine, built by American labor and American capital, and manned by American seamen.

This policy would mean more than merely diverting the millions which are now paid every year to foreign vessel-owners, into the pockets of American vessel men. It will

mean that these millions are to be spent in America instead of abroad; it means the employment of thousands more men, not only in shipyards, but in coal mines and iron mines, in furnaces and mills, in forests and sawmills and wood-working establishments—in short, in every line of industry from the obtaining of the raw material until it is turned into the steel and iron and woodwork and machinery which go to make up the modern vessel.

VESSELS CLASSED.

The American Shipmasters' Association, New York classed the following vessels during the week in the "Record of American and Foreign Shipping:" Ship Algoma, the three-masted schooners Carrie Strong and J. B. Holden, and the barkentine Daisy Read.

WHALEBACK'S BIG RECORD.

All records in lake excursions were broken when the whaleback Christopher Columbus arrived at the docks in Duluth from Chicago to go into winter quarters at West Superior. Barring one or two side trips this practically ended the season for the huge flyer, and the books showed a total of 81,143 passengers carried since the Columbus began the summer's traffic. This is a new record. The world's fair record at Chicago was outdone by many thousand passengers. The bulk of the business was done between Chicago and Milwaukee, and the results are regarded as significant, being attributed in part to the return of prosperity, the latter portion of the season being the most successful.

FLUCTUATIONS OF WATER LEVELS.

As an indication of the peculiar fluctuations of water levels near the mouth of Detroit River it is found that the recorded depths during the week ending on the 11th inst. were as follows. September 5, 18 feet 1 inch with wind south, moderate; September 6, 17 feet 10 inches, south, moderate; September 7, 17 feet 10 inches, south, moderate; September 8, 17 feet, 10 inches, south, moderate; September 9, 17 feet 8 inches, south, light; September 10, 17 feet 10 inches, south, light; September 11, 18 feet, north-east, light.

THE UNITED STATES MERCHANT MARINE.

On June 30th, the merchant marine of the United States numbered 22,633 vessels, aggregating 4,769,020 gross tons. The tonnage on the great lakes was 1,410,103, an increase of 86,000 tons since June 30, 1896. The Atlantic and Gulf tonnage fell off 20,000 tons, and the Pacific tonnage remained stationary. Of the states, New York leads, with 4,857 vessels; tonnage, 1,331,743. Michigan is second, 1,132 vessels; 477,602 tons. Ohio is third, 558 vessels; tonnage, 390,052.

LAUNCHING OF A GERMAN IRONCLAD.

At the launching recently of the new German ironclad Kaiser Wilhelm Der Zweite, Prince Henry of Prussia made a speech, in the course of which apostrophizing the ship, he said.

"The emperor looking forward with a clear eye into the future labors indefatigably to secure for Germany her people honor of the high seas. And, verily, it is a high and noble aim. The emperor's wish is to see the empire stand before the world in independent firmness, of unexcelled strength on land and capable of defense at sea, through the German navy, of her rights and honor. The name you will henceforth bear is a name which is our battlecry and our dying cry."

At the dinner which followed the launching of the battle ship, Prince Henry of Prussia toasted Emperor William as the godfather of the ship.

THAT PROPOSED ARMOR PLANT.

It is difficult to understand why Congress should or could undertake to determine the exact price of armor plate for the new navy. Men not versed in the manufacture of the required metal are certainly not the best judges of its cost.

It is beyond question that the majority of our law makers are lawyers, as perhaps they ought to be, and it being the sense of Congress that too much money per ton was being paid out for armor plate, a national manufactory was suggested, a commission appointed to look into the question and every possible location except the Pacific slope has applied to have such a plant located by the Federal government at or near where it would do the vicinity or rather its inhabitants most good.

Last week a delegation of representative men from the large sections of the south went before the naval board which is considering the question of establishing a government armor factory, and urged that the south offered the greatest advantages in cost of iron, labor, transportation, etc., for the location of the proposed government factory.

The delegation was made up of Commissioner of Pensions H. Clay Evans, of Tennessee, and Representative Wheeler of Alabama, Livingston of Georgia and Gaines of Tennessee. It was stated at the hearing that the iron used by the large private firms now making armor plate was bought to a large extent from the south at the low price of \$5.40 to \$5.70 per ton. It was argued also that an inland armor factory in the south would be more secure from attack in case of war than one near the Atlantic coast in the north.

Letters favorable to the southern industry were presented from Senators Platt of New York and Stewart, Indiana, and it was stated that Senator Chandler of New Hampshire, who has taken a leading part in the plan of a government armor plate manufactory, had written a letter favorable to its establishment at Sheffield, Ala. The delegation filed a written statement setting forth the many advantages of the south in this particular.

Commodore Howell, president of the board, called attention to the fact that the board could not, under the instructions of the navy department, go into the question of the location of the plant.

Representative Livingston and others made the point that such information was what Congress desired and that the scope of the board's orders should be enlarged. Accordingly the delegation, accompanied by Commodore Howell, went before Assistant Secretary Roosevelt. He held the views of the delegations, but told them that it would be impossible to consider questions of site at this time.

It is superfluous to state that scores of other applications have also been filed, yet the Secretary of the Navy can make no positive decision regarding the location of the plant until Congress meets.

TO GATHER LAKE STATISTICS.

It is announced from Duluth that George G. Tunell, the recently appointed statistician of the lakes, is at work on his first report. Mr. Tunell, who is certainly a competent official, has a vexatious task before him. Without legislation giving him authority to charge existing conditions Mr. Tunell will be unable to prepare satisfactory reports. He will soon be able to suggest methods that will permit of the collection of complete reports.

Recently the United States Customs authorities at Detroit made a ruling that every time a bicyclist entered that port from Canada with a foreign make of bicycle he must pay full duty on his wheel. Under instructions from Washington the ruling was promptly cancelled.

NEWS AROUND THE LAKES.

CHICAGO.

Special Correspondence to the Marine Record.

Grain freights are firm this week on the basis of 1½ cents on corn to Buffalo.

At the Chicago Shipbuilding Co.'s shipyard the steamer J. S. Fay was in dry dock for repairs to stern bearing and some calking.

The schooner Charlotte Raab was stripped and laid up on Tuesday, the freights being too poor for her to pay the expense of running her.

Capt. John Prindiville chartered the steamer Norwalk for wheat to Kingston at 3½ cents; steamer Lansing, corn to Buffalo at 1½ cents, steamer Canisteo, corn to Ogdensburg at 3½ cents; barge Stewart, wheat to Kingston at 3½ cents.

At the shipyard here the steamer City of Kalamazoo was in dry dock for bottom scraping and calking, a new stern bearing and tightening wheel; the tug Mollie Spencer for stopping leak and repairs to stern bearing; the tug McGordon for repairs to stern bearing and some calking.

H. W. Cook & Co. chartered the steamer Fred Pabst for 120,700 bushels of corn to Buffalo at 1½ cents; schooner Minnie Slanson for clipped oats to Sarnia at 1½ cents; steamer Westover and consorts Bliss and Parana for lumber, Manistique to Chicago at \$1.12½; schooner H. C. Winslow, lumber Escanaba to Chicago, at \$1.25.

J. J. Rardon & Co. chartered the steamer Caledonia for wheat to Buffalo at 1½ cents, barge Northwest, clipped oats to Buffalo at 1½ cents, steamer Progress, corn to Buffalo at 1½ cents, steamer Phenix, clipped oats to Fairport at 1½ cents, steamer M. B. Grover, oats to Buffalo.

The Dunham Towing and Wrecking Co. raised the tug George B. McClellan Tuesday. She had been laying on the bottom of the river for some time near the N. W. R. R. Co.'s bridge and as the company wished to repair their dock they had her removed. One of the Dunham Co.'s divers went down and patched her up and she was pumped out and towed to a dock near Erie street bridge. The McClellan is owned by the estate of the late Jacob Johnson. She was once one of the most powerful and best tugs on the river.

The Goodrich Co.'s steel twin screw passenger steamship Virginia finished her season's work on Sunday, running between Chicago and Milwaukee, during which time she carried thousands of excursionists and eclipsed the number carried on previous seasons by many thousands. The Virginia left for Manitowoc on Tuesday to lay up. The passenger business has been so prosperous during the season just closed that the Goodrich Co. intend to expend over \$100,000 the coming winter in remodeling and improving some of its steamers. The most important change will be in their steamer Virginia. She is to be increased in length fifty or sixty feet and will receive finer lines forward. The top of the present skylight over the saloon cabin will be taken off and a cabin with glass sides placed on, which will extend across nearly to the edge of the hurricane deck. The cabin will not have state-rooms and will be for the accommodation of excursionists only. Two additional boilers will be given the steamer. With the change in her bow and the extra supply of steam it is anticipated that the Virginia will make the run between this port and Milwaukee in four hours. The estimated cost of the additions and improvements is \$75,000. The steamer Indiana will be lengthened 24 feet and will be given upper cabins, the same as the company's steamer Iowa. These addition will give her nearly 50 more staterooms. The steamer City of Ludington will be lengthened about fifteen feet and she will receive a new engine and new boilers. The offices will be constructed on the main deck with a large social hall adjacent. The contract for the work on the Virginia has not yet been given out. Burger & Burger, the well known shipbuilders at Manitowoc, who built the Indiana, will do the work on the Indiana and Ludington.

BUFFALO.

Special Correspondence to the Marine Record.

The steamer C. F. Curtis is to go into dry dock for repairs after her collision with the Harlem at Detroit.

Some of the machinery of the new Northern Elevator has been tested and found to be in excellent working order. It is hardly expected that it will receive any grain this week.

Coal freights have been quiet all through the week at the now usual miserable rate of 20 cents to either Lakes Michigan or Superior.

The steamer Saginaw Valley wet 3,300 bushels of her Toledo wheat cargo. It was sold to John Kennedy at 30 cents a bushel. The cause of the leak has not been learned. This was the boat's first cargo during the season.

The passenger steamers North-West and North-Land have gone into winter quarters after a very successful season between here and Duluth. The boats are easily the finest on the lakes and the service as well as patronage improves each year.

The schooner Kelderhouse got into trouble this week and was anchored off Long Point with the loss of her spars and canvas. She was bund from Erie to Detroit with coal and after being reported the tug Fabian started

from here and towed the schooner to her destination.

The wind of Saturday disturbed the breakwater contractors considerably and one of the cribs, which had been sunk and partly filled with stone, was floated by the waves and went ashore near the base of operations at Stony Point. They have since brought it back to its place in the line of the breakwater.

The Great Northern Co.'s elevator is about ready for business. It is not quite finished, but such of the machinery as was complete was started up and ran very satisfactorily. The elevator may take a cargo this week and may not. This splendid house is likely to produce a revolution in grain handling here when ready, on account of superior build, capacity and appliances.

DETROIT.

Special Correspondence to the Marine Record.

The deep waterways commission has leased rooms on the sixth floor of the Wayne County bank building as headquarters.

The steamer Miami, of Toledo, has been purchased by John Stevenson of this port from Curtis & Brainard. She is a 228-ton vessel built at Marine City in 1888 and rates A1. Her insurance valuation is \$15,000. She has been in the lumber trade heretofore, but Mr. Stevenson will use her for the general cargo trade.

The Western Line steamer Harlem collided with the C. F. Curtis off Smith's coal dock and while the large steel steamer went on her way to Chicago the Curtis was compelled to make temporary repairs before proceeding on to Buffalo for survey and final repairs. The wooden boat is badly damaged forward but the cost of repairs has not been ascertained.

The grounding of the steamer Pabst off Wayne street, has directed attention to the existence of the shoal, and the question of its removal. Some of the dock owners along the river front think that the United States government should have it dredged away. However, the government concerns itself only with the main channel of the lake route and it is very improbable that any money would be expended to improve the dockage of a lake city so long as more important improvements are needed on the main channel here and elsewhere.

CLEVELAND.

Special Correspondence to the Marine Record.

The Navy Department has abandoned the idea of establishing naval recruiting stations at Toledo and this port.

The steamer Pascal P. Pratt was in the Ship Owners' Dry Dock this week for bottom calking. The Brazil was also docked.

The Cleveland Dry Dock Co. had the wooden steamer Egyptian in dock this week for calking, new forefoot and some new planking.

Work at the yards of the Globe Iron Works Co. is brisk and a large number of men are employed on the recent government contract for two new vessels.

The lighthouse board has this week awarded a contract for thirteen gas buoys, for use on the lakes, to the Safety Car Heating & Lighting Co. of New York, at its bid of \$23,795.

A party of Cleveland men have formed a company to go to Alaska in the spring and hunt for gold. A vessel is to be built in Seattle and they will then start for the Yukon.

A fireman named Michael Ormsby, hailing from Detroit, was lost from the steamer State of New York on Thursday through slipping off the gang plank while the steamer was moored to the dock.

Charges have been made against Captain Motley, keeper of the life-saving station, for inattention to duty. It is all nonsense, however, as the station was never better kept or been in charge of so efficient, prompt and skilled keeper as Capt. Motley has proved himself to be.

Shippers and brokers are doing some figuring on several blocks of ore to be moved before November 1 from the head of Lake Superior and Marquette. From the latter port 65c is offered. Some business will be closed up before the end of the week. Wild cargoes are offered more freely and shippers are unable to get boats at the head of the lakes at 65 cents.

When the extensive plant which the Cleveland Ship Building Co. is putting in at Lorain is completed it is expected that the largest cargo steamer on the lakes will be started and nothing less than a 6,000-ton craft is spoken of. With a little better draft of water at lake ports there is no doubt but such a vessel could be handled; in fact, they are coming very near to such a tonnage in some of the last new boats.

What a fuss the daily papers are making on account of Mr. Gilchrist dropping his membership in the Lake Carriers' Association! It is the privilege of Mr. Gilchrist to do as he thinks proper in such a matter. It appears that the wage rate is the main bone of contention in the question and the tonnage that Mr. Gilchrist owns, controls and handles is not of the class to pay the highest rates. In justifying his position Mr. Gilchrist says that if he had paid high wages his vessels would have been forced to go out of service. The statement that he wanted to run the Lake Carriers' Association is somewhat broad, as he merely advocated what a good many others thought was right. It is manifest that Mr. J. C. Gilchrist has been unable to pay high wages without incurring loss. It has

been necessarily small wages or no wages, and he has done excellently in keeping his fleet running this season, considering the very low freights.

FLOTSAM, JETSAM AND LAGAN.

Steamer Kittie M. Forbes is receiving new bulwarks at Marine City.

Albert Coan, assistant keeper of the Round Island light, has been dismissed.

John Stevenson has chartered his newly purchased steamer Miami to carry ties from Cheboygan to Erie.

Richelieu and Ontario Line of steamers has been cut down to three trips a week, from Toronto to Montreal.

The tow of scows which the steamer Rust has in charge from Cleveland to Boston, arrived safely at Ogdensburg.

The wheat cargo of the schooner Nassau was not damaged on the way to Ogdensburg from Detroit. A heavy loss had been anticipated when the vessel was unloaded.

The small schooner Alert was wrecked off St. Joseph, Mich., this week and is a total loss. She became water-logged on her way to Muskegon. Life-savers took off the crew.

It is rumored that the steamer Vulcan, sister ship of the Vega, is to be lengthened 100 feet at the new yards of the Cleveland Shipbuilding Company, at Lorain to increase her carrying capacity.

From Nile's Register of February 21, 1818: "A regular line of wagons and packets are established between the city of New York and Detroit. The cost of carriage in no case exceeds \$4.50 per cwt."

Capt. George P. McKay says that there is no danger of vessels striking the wreck of the Grand Traverse at the head of Lake Erie. The captain of the steamer Fern told Capt. McKay that there is twenty feet of water over the wreck.

Ore shipments from the docks fed by the mines in Duluth district passed the 5,000,000-ton mark last month. Two Harbors leads with 3,223,000 tons, Missabe follows with 1,630,000 tons, and Allouez Bay brings up the rear with 472,000 tons.

The tug Ella Smith has located the wreck of the steamer D. M. Wilson which went down with a cargo of coal off Thunder Bay Island three years ago. She lies in sixty feet of water and appears to be in good condition. An effort will be made to recover the machinery.

The barge Lizzie P. Betts, which was recently purchased by H. L. Coman at marshal's sale, has gone to the bottom at Bay City, and lies decks to. The oakum in her seams came out, letting the hold fill with water. The Betts is being stripped and may never sail again.

The yards of F. W. Wheeler & Co., West Bay City, will be a very busy spot this coming winter. Several contracts are already on hand as well as others that are being closely figured on, and the large staff of men will be kept in employment during the entire winter, or at least indications are such.

When the new plant at Lorain is completed the Cleveland Shipbuilding Company will lay the keel of what will be the largest boat on the lakes. She will be 450 feet over all, 430 feet keel, 50 feet beam and 28 feet deep. The longest boat now in service is the Rockefeller steamer Fairbairn, which is 434 feet over all. In beam 48 feet has been the limit for freighters, and 28 feet for depth. In both these items the new boat will excel. Such is the report and we trust that it may actually and practically eventuate.

George W. Naughton, recently fined \$100 for not having the marine papers of his vessel where the boarding officer could see them at Grand Haven, has had the fine remitted, on showing that the papers were all right and on board, but were locked up during his absence so that the officer in charge could not get at them.

Capt. F. I. Merryman, of Port Huron, has begun a suit for \$25,000 damages against Edmund Hall, dredging contractor, of Detroit. Merryman alleges that while acting as government inspector on one of Hall's dredges in the Black river last spring, he was knocked into the river, badly scalded and his eyesight permanently injured, by the blowing out of the crown-sheet of the dredge's boiler.

Advices from Bay City state that during the past few days 5,750,000 feet of logs have arrived for the Holland Emery Lumber Co., of Tawas, to be sawed here; 2,985,290 for Ed Hole were brought by the tug Manistique, and 3,453,556 by the tug Gettysburg, for Alger, Smith & Co. The tugs Manistique and Protector have arrived with a monstrous raft of 67,000 pieces. They saved the raft from destruction in the recent storm by seeking shelter in Hammond's bay.

AN OLD IDEA.

A. J. Carson, a commercial traveler of Kalamazoo, Mich., has patented a device to prevent foundered vessels from being completely lost. His idea is to place a buoy on the deck of the ship in such a position that when the vessel sinks the buoy is freed and stays on the surface. A long steel line is connected with the buoy. The rope passes through an aperture in the deck and is wound around a reel in the hold of the ship. This reel is mounted on ball-bearings and the small hawse pipe through which the rope passes is similarly equipped to prevent friction and avoid the danger of entangling. After the vessel reaches the bottom the buoy will serve as a means of locating the wreck, because it floats to the surface and is still attached to the hull.

ONLY A FEW YEARS AGO.

To those who are interested in marine antiquity on the lakes the following quotations may prove of passing value. They are taken from Nile's Weekly Register, a periodical of wide circulation during the earlier part of the present century:

August 31, 1816.—Many steamboats are preparing to ply along the eastern coast of the United States. We shall soon have them on the great lakes. Two will run between Buffalo and Detroit the ensuing spring."

Jan. 8, 1818.—"A Detroit paper estimates that \$15,000 were paid for the passages of individuals between that city and Buffalo from the 10th of May to the 10th of November last. A steamboat is to run on the lake next spring."

June 20, 1818.—"The steamboat that is to ply between Buffalo and Detroit has been launched at Black Rock, and will soon be ready for the lake."

Sept. 19, 1818.—"Erie, on Lake Erie, was in like manner first visited by a steamboat on the 21st ult. She has since returned to Black Rock and will leave it every Wednesday for Cleveland and Detroit."

Oct. 3, 1818.—"The Erie steamboat from Buffalo arrived on her first trip to Detroit on the 27th of August. The Detroit Gazette observes 'nothing could exceed the surprise of the sons of the forest on seeing the Walk-in-the-Water moving majestically and rapidly against a strong current without the assistance of sails or oars. They lined the banks above Malden and expressed their astonishment by repeated shouts of 'Taiyoh, nichee.' A report had been circulated among them that a big canoe would soon come from the noisy waters, which by orders of the Great father of the Che-mo-ko-mons would be drawn through the lakes and rivers by sturgeons. Of the truth of the report they are now perfectly satisfied."

Nov. 7, 1818.—"The Albany Gazette says: 'Upwards of 100 passengers were on board the steamboat Walk-in-the-Water on its last trip from Buffalo to Detroit.' Now if a person were to look forward a few years we might expect to find one or two steamboats leaving Buffalo every day for Detroit and Michilimackinac, and cities and towns not yet even contemplated on the shores of our inland seas, and see busy seats of commerce and the throng of men where the native forest now stands untouched by the hand of civilization."

THE CLEVELAND AND BUFFALO LINE.

General Manager T. F. Newman, of the C. & B. Line said this week that he would likely be in position to make a statement shortly regarding the much-discussed boat. Mr. Newman has been figuring on the plans and talking with the Detroit Dry Dock Company, which will probably build the vessel. The C. & B. company could get along without a new steamer, but another boat like the City of Buffalo would be a desirable addition to its facilities.

The company's management is pleased with the success which attended the use of anthracite coal when it was impossible to secure soft coal. With the present basis of low prices bituminous coal is considerable cheaper than hard coal, and, therefore, the company has reverted to the former fuel.

Hard coal was used on the City of Buffalo only, her machinery being designed to burn either fuel.

ONE VIEW OF IT.

Mr. George T. Angell, of Boston, Mass., editor of Our Dumb Animals, after having given his reasons for his conclusions, says:

1. That the Monroe doctrine is a humbug.
2. That Great Britain has just as good right to buy Cuba from Spain—or anything else she wants) without consulting us, as we had to buy Alaska from Russia without consulting her.
3. That as all the great powers of Europe have larger armies and navies than we have—and as we have two enormous seacoasts (separated by a continent) to defend, unless we want to lose the gold mines of Alaska and pay perhaps a thousand million of dollars for ransom of our large cities, we had better attend diligently to our own business, and treat all other nations with respect.
4. That the talk of lots of our congressmen is as silly as the proposition of the head of the New York militia to attack Canada, and of Gen. Flagler, of our U. S. army to blow up the Welland Canal and establish a chain of defensive fortifications from Ogdensburg to Duluth—and

all are as silly as a proposition to build a Chinese wall between ourselves and the British possessions, reaching from the Atlantic to the Pacific, or blow up Niagara Falls and empty the Great Lakes into the Atlantic Ocean.

5. That we have a lot old politicians who seem anxious to get us into a war with somebody about something in which the young men would have to do all the fighting and get maimed, wounded and killed.

6. That war is exactly what Gen. Sherman called it, "hell on earth," and the politicians who try to get us into it ought to be locked up in lunatic asylums, or put to hard work in state prisons.

7. That (as we have often suggested) there is plenty of employment for all our unemployed men on levees, canals, public roads and other much-needed internal improvements, and plenty of money, under a proper system of taxation, to pay for it.

NOTICE TO MARINERS.

Notice is hereby given that the positions of the black gas buoys No. 3 and No. 5, marking the Ballard Reef Channel, Detroit River, have been changed.

Buoy No. 3 is now 975 yards above Buoy No. 1, and Buoy No. 5 is 975 yards above Buoy No. 3. The position of Buoy No. 1 has not been changed.

These three buoys are in a line parallel with the axis of the channel and about 25 feet to the westward of its western limit. Buoy No. 5 is about 4303 yards S. E. by E. 1-2 E. from Ballard Reef Light vessel.

The black spar buoy (No. 5 1-2) which formerly marked a ledge of rock in this channel, has been discontinued, the ledge having been removed.

In navigating this channel its eastern side should be avoided while the improvements are in progress, on account of the rocks that may be thrown out in blasting.

THEO. F. JEWELL,

Commander, U. S. N., Inspector 10th. L. H. Dist.

FREIGHT RATES IN THE PAST.

A resume of wheat and corn rates between Chicago and Buffalo will be of value as a reference. The following figures give the average rates in cents during six months in each one of the last 12 years. The highest and lowest rates in each year are given:

	June.	July.	Aug.	Sept.	Oct.	Nov.
1896—Wheat	1.5	1.2	1.3	1.4	2.0	2.1
Corn	1.3	1.1	1.2	1.2	1.9	1.9
Highest rate wheat 3c, lowest 1.2c, average 1.7c						
1895—Wheat	1.2	1.1	1.6	2.1	3.0	3.0
Corn	1.1	1.0	1.4	1.9	2.9	2.7
Highest rate wheat 4c, lowest 1c, average 1.9c.						
Highest rate corn 4c, lowest 1c, average 1.7c.						
1894—Wheat	1.2	0.9	1.0	1.4	1.1	1.3
Corn	1.1	0.9	0.9	1.3	1.0	1.3
Highest rate wheat 2c, lowest 0.8c, average 1.2c.						
Highest rate corn 3c, lowest 0.8c, average 1.2c.						
1893—Wheat	1.8	1.2	1.2	1.7	2.1	2.0
Corn	1.6	1.1	1.1	1.5	1.9	1.8
Highest rate wheat 2.7c, lowest 1c, average 1.6c.						
1892—Wheat	1.7	2.4	2.3	2.4	2.4	2.5
Corn	1.5	1.8	2.2	2.1	2.1	2.4
Highest rate wheat 4c, lowest 1c, average 2.2c.						
1891—Wheat	1.4	2.3	2.8	3.3	2.2	4.1
Corn	1.2	2.1	2.6	3.1	2.1	3.8
Highest rate wheat 5.2c, lowest 1c, average 2.5c.						
1890—Wheat	2.2	2.3	1.5	2.0	1.8	2.1
Corn	2.0	2.0	1.3	1.8	1.6	1.08
Highest rate wheat 3.5c, lowest 1.5c, average 1.9c.						
1889—Wheat	2.0	2.01	2.07	3.0	3.0	2.5
Corn	1.8	1.9	2.4	2.7	2.7	2.3
Highest rate wheat 3.7c, lowest 2c, average 2.5c.						
1888—Wheat	1.9	2.2	3.2	3.5	2.4	2.3
Corn	1.7	1.9	2.9	3.2	2.1	2.1
Highest rate wheat 4c, lowest 1.7c, average 2.7c.						
1887—Wheat	5.1	3.6	3.8	4.0	4.9	4.1
Corn	4.6	3.2	3.4	3.6	4.5	3.7
Highest rate wheat 6.2c, lowest 3c, average 4.1c.						
1886—Wheat	2.8	2.3	3.5	4.4	4.6	4.2
Corn	2.6	2.1	3.2	4.1	4.3	3.9
Highest rate wheat 5.3c, lowest 2c, average 3.6c.						
1885—Wheat	1.3	1.3	1.8	1.6	3.1	3.2
Corn	1.1	1.1	1.5	1.4	2.8	2.8
Highest rate wheat 3.8c, lowest 1c, average 2c.						

THE DETROIT MARINE POSTOFFICE.

The marine postal service recently established on the river at Detroit has proved of the greatest benefit to the sailing community this season, and in fact has been widely taken advantage of by all interested persons.

At the present time there is a long list of letters awaiting delivery at the marine postoffice, according to a list just received from the postmaster at Detroit. There are upwards of 150 letters now being held, and in some cases there are two or more addressed to the same person.

WHAT A SUBMARINE BOAT CAN DO.

When engaged in harbor defense duty its position will be outside the outer line of harbor defense—that is, beyond the range of the guns defending the entrance. While performing this duty it will lie awash—that is, with only the top of its turret over the surface of the water. On the approach to an enemy's vessel the smoke stack will be shipped and the aperture on top of the turret through which it passed will be quickly closed water-tight. She will then run in a direction to intercept the enemy's ship, still remaining in the awash condition until she comes near enough to be discovered by the lookouts on the ship, when she will go from the wash to the entirely submerged condition. The distance from the ship at which she must dive will depend on the weather. In rough weather she can come close without being observed.

Having come within a distance that the operator estimates at two or three hundred yards from the ship, the diving rudders are manipulated so as to cause the top of the turret to come for a few seconds above the surface of the water. During this short exposure of the turret—much too short to give the enemy a chance to find its distance and train a gun on it capable of inflicting any injury—the pilot ascertains the bearing of the enemy's ship, alters his course or makes another dive if necessary. If he finds that the submarine boat is within safe striking distance, say 100 yards, a Whitehead torpedo is discharged at the ship. A heavy explosion within six seconds after the torpedo is expelled will notify the operator that his attack has been successful, and he may then devote his attention to the next enemy's ship that may be within reach.

When the boat is running on the surface of the water, with full steam power, and it becomes necessary to dive quickly, the pilot gives the order "Prepare to dive." The oil fuel is instantly shut off from the furnace, the valves are opened to admit water to the water ballast tanks, an electric engine draws down the smoke stack and airshaft into the superstructure, and moves a large massive sliding valve over the aperture on the turret through which the smoke stack passes. These operations will be completed in about thirty seconds, when the boat is in the awash condition and prepared to dive. In twenty seconds more it will be running horizontally at a depth of twenty feet below the surface of the water, and quite beyond the reach of the enemy's projectiles.—John P. Holland in the Marine Number of Cassier's Magazine.

THAT PERFORATED SAIL IDEA.

The Portland Oregonian announces the arrival there of the British ship Andreta with a suit of perforated sails. The idea originated with an Italian captain named Bassalo, and he experienced some difficulty in making seafaring men believe that there was any advantage to be gained, but an Italian ship recently made the trip to Sydney, Australia, with the perforated sails, and the captain reported that when sailing free on a light breeze the increased speed was fully two knots, while with a strong wind it was not quite so much. Captain Bassalo's theory is that wind, after having done its work on the ordinary sail, forms an elastic cushion in the belly, and this causes a large amount of wind to be thrown back broken, and consequently lost, and he considers that his invention permits of the vessel obtaining full benefit of whatever winds she may get.

Capt. Nickerson, of the Andreta, adopted the system, after seeing a practical illustration of the advantages resulting, two yachts built alike being raced, one with the old style sail and the other with the perforated; the latter beat the other fully a mile an hour. Capt. Nickerson does not claim quite so much of an advantage as the Italian captain, but thinks there is an advantage of at least one knot an hour. There are two holes in the square sails, those in the royals being about six inches in diameter, and in the others about nine inches in diameter. The fore-and-aft sails have but one hole each. This is certainly a revelation to all sailors as it was fully understood, believed and acted upon that the nearer a sail set like a board or a flat firm surface the more pulling power it had and it will be difficult to convince the majority otherwise, although, much can be said in favor of the Italian captain's idea.

The outlook for improved lake business is better at present than at any time during the season of navigation, and as is usual towards the fall months, freights will soon go up to where there will be something in it for the vessel.

WRECK AND SALVAGE.

There has been a laxity of rights of ownership in what may be termed floatsam or jetsam and in some instances finders considered they had every right to be keepers. A recent article in the Marine Record on this subject brought about some discussion and now Capt. Wm. Babb, Goderich, Ont., forwards some clauses contained in the wreck and salvage act of the Dominion of Canada, some of which we reprint:

"Whenever any person takes possession of wreck within the limits of Canada, he shall, as soon as possible, deliver the same to the receiver."

"Every person who does within the limits of Canada any of the acts following, that is to say: Steals or maliciously destroys any wreck, or sells any vessel or wreck found within the limits of Canada, not having a lawful title thereto, is guilty of felony, and liable to seven years' imprisonment."

"When a receiver suspects that any wreck is secreted or concealed by or is wrongfully in the possession of any person, he may apply to any justice of the peace for a search warrant, and such justice shall have power to grant such warrant, by virtue whereof it shall be lawful for the receiver to enter (and if need be by force) any house, building and place, whether enclosed or unenclosed, and any vessel, and to search for, remove and detain any wreck there kept or secreted; and if any wreck is discovered, and the person in whose possession and on whose premises the same is found fails, on being summoned, to appear before two justices of the peace, to prove to the satisfaction of such justice that he was lawfully entitled to the possession of such wreck, he shall be liable to a penalty not exceeding eighty dollars for the first offense,—and for every subsequent offence shall be liable, at the discretion of the justices, either to a penalty not exceeding two hundred dollars or to imprisonment, with hard labor, for any term not exceeding three months; but the justices may, if they think fit, commit him for trial for misdemeanor under this act; if any such discovery as aforesaid is made in consequence of information given by any person to the receiver, the informer shall be entitled, by way of salvage, to such sum not exceeding eighty dollars as the receiver allows under instructions from the Minister."

LOSS OF THE SCHOONER KENT.

The schooner Henry A. Kent, bound from Ashland to a Lake Erie port with a cargo of iron ore, in tow of the steamer J. C. Gilchrist, foundered off Stannard Rock, Lake Superior, in the gale of Thursday night last.

The Kent sprung a leak when off Keeweenaw Point about 9 o'clock Thursday night. The pumps were at once manned and an attempt made to reach Marquette, but the heavy seas began breaking on the bulwarks and the water gained so rapidly that it was seen the vessel could not be saved.

As it was impossible to launch the life boat in the terrible sea, Capt. Blatten, of the Gilchrist, made the extreme hazardous attempt of taking his steamer alongside the sinking schooner in order to rescue the crew.

The first attempt was unsuccessful, but the second time the steamer was brought close to the sinking vessel.

Both boats were rolling heavily in the trough of the sea, and the work of rescue was exceedingly difficult. After heroic efforts Capt. Sullivan and his crew were pulled aboard the Gilchrist, and a few minutes later the Kent went down.

The Gilchrist stayed in the vicinity of the wreck until daylight, to pick up anything of value that might come to the surface, but secured nothing.

The Kent was owned by J. C. Gilchrist, of Cleveland, and had an insurance valuation of \$22,000. She was built in 1873, and registered 771 tons.

The Kent, three years ago, was wrecked on Lake Superior, near Marquette, and remained on the beach several months. Wrecking expeditions were sent to the stranded boat, lives were lost in the attempt to get her off into deep water, which was finally successful.

THAT IMPORT DUTY.

Attorney General McKenna announced his opinion in the matter of section 22 of the new tariff law on Tuesday. He holds in effect that goods coming directly into the United States from foreign countries through Canadian ports are not subject to the discriminating duty of 10 per cent and also holds that foreign goods shipped from

countries other than British possessions in British vessels are not subject to the discriminating duty.

Two questions were asked the Attorney General, the first of which was, in effect, whether the discriminating duty of 10 per cent provided for in section 22 should be assessed against an invoice at Vancouver in British vessels and thence shipped through Canada to Chicago; the second question was whether the discriminating duty should be assessed against a cargo of manganese ore from Chili which recently arrived in a British ship at Philadelphia. Both these questions the Attorney General answers in the negative.

DRY DOCKS WANTED.

A naval board is now considering the dock needs of our navy, and it is to be hoped the urgency for the building of new docks for the accommodation of large war vessels will be so strongly impressed upon Congress that that body when it meets will act promptly towards constructing a few more dry docks and make liberal appropriations. The necessity for having to send our war vessels to a foreign country for docking exhibits a most humiliating state of affairs. A country without adequate facilities for docking its largest and most effective war ships would be placed at a great disadvantage in case of war. Large and substantial dry docks are not built in a day. At the present time there is no dock on the Atlantic coast available for taking in a first-class iron clad of the Indiana type and others are being built. It would seem as though individual enterprise would have been foresighted enough to have anticipated this want and have been prepared for an emergency of this kind. Such, however, has not been the case and so the Indiana had to be ordered to Canada for docking, and now it is said that on account of the keel blocks in the Halifax dry dock being so far apart that the vessel more or less strained herself.

NUMBER AND TONNAGE OF THE WORLD'S MERCHANT MARINE.

The following table from Lloyd's Register shows the world's tonnage, but vessels under one hundred tons are not included.

FLAG.	No.	1896-97.	
		TONS.	
		NET.	GROSS.
British { United Kingdom.	6,508	6,143,282	9,968,573
Colonies.	865	327,964	539,870
America, United States of.	680	718,024	1,005,459
Austro-Hungarian.	173	156,931	253,755
Danish.	283	152,212	250,200
Dutch.	217	222,660	323,147
French.	585	469,948	930,785
German.	984	913,613	1,436,539
Italian.	232	221,376	358,704
Norwegian.	638	332,912	526,484
Russian.	300	171,507	289,108
Spanish.	403	318,744	485,441
Swedish.	538	160,152	247,183
Other European Countries.			
Central and South America.			
Asia.			
Other Countries.			

WILL MAKE SHIPMENTS BETTER.

The bulletin just issued by Mr. John Hyde of the Agricultural Department on the wheat crop of the world may be accepted as expert information. From 1891 to 1896 the annual European wheat crop was 1,428,000,000 bushels and according to Bromhall's Corn Trade News the yield for 1897 will be 1,329,000,000 bushels. Other estimates place the shortage at 115,000,000 bushels. According to Mr. Hyde nearly all the wheat countries are short, both in their last crop and in their supplies on hand. His report on Australia is especially interesting: "The latest accounts from Australia indicate that the drought from which that country has suffered for the last two or three seasons has been broken, and that the wheat crop is giving good promise throughout most of the Australian colonies; but the area was narrowed by drought at seeding time, and, as stocks must be low, it is not likely that, even with a full yield, the crop will be one of which any great amount can be spared for exportation." The harvest month in Australia as in Argentina is January. In the latter country locusts are doing great damage to the growing grain and there are many chances of serious damage to the crop during the next three or four months.

THAT CHICAGO DRAINAGE CANAL.

With their big canal, sewer or ditch practically finished, the trustees of the drainage channel at Chicago, are wondering how they are going to get the water to fill it. They are puzzled, and the problem promises to become still more intricate.

Chief Engineer Randolph has recommended two plans as a way out of the difficulty. One of these is to dig a twenty-five feet conduit through Thirty-ninth street from the lake to the south branch at Halstead street. Such a conduit, he says, would supply a volume of 40,000 cubic feet of water a minute. The requirement of the law is that 300,000 cubic feet of water per minute shall be sent into the canal. The conduit, therefore, would leave 260,000 cubic feet per minute to be sent through the river. It would do away with the necessity, says Mr. Randolph of doing so much widening and deepening of the river, as would otherwise be required.

The engineer says that under ordinary conditions the water would flow from the lake through Thirty-ninth street to the canal, but that under unfavorable conditions the water would flow back from the south branch to the lake. The unfavorable conditions he alludes to are a low lake level and prevailing southwest winds.

The other plan proposed by the chief engineer is to have a system of intercepting sewers and a pumping station to take the flow of the river and force it through the west fork of the south branch into the canal. It is estimated that the original outlay for either plan would aggregate about \$1,500,000.

Opposition to both of the plans recommended by Mr. Randolph comes generally from marine men who seem to better understand the conditions.

THE OLD COMPLAINT.

Said a Detroit man the other day and a member of the association, too, that vessel owners are of the opinion that if the brokers in Cleveland, Chicago and Duluth-Superior took a stand for higher freight rates the shippers would be compelled to grant them.

There is a demand for grain that has been so steady that all the tonnage in sight has been taken for it every day in the last three weeks. Yet there has been only a slight raise in rates, so light that with nothing to carry up vessels are making but little money out of it. It seems to me that the remedy lies with the broker. The brokers should combine and refuse to charter unless the shipper is willing to give something better. As it is, I believe that the majority of the brokers are playing in with the shippers so as to induce the latter to throw the business their way. All the broker thinks of is getting his little \$10, \$20 or \$30 per charter, according to the size of the cargo.

This is the old story, if an owner will not charter his vessels below a certain figure, the broker knows exactly where he stands and can not place the tonnage at forbidden rates. Brokers will not and never did go clearly against the rate that an owner wished to accept, furthermore, in the lake trade as well as any other, they are not supposed to rake the chestnuts out of the fire for vessel owners, their business is to place as many charters as possible and in the majority of cases they endeavor to do so. One thing about this feature is, that there are too many owners of vessel property on the lakes acting as agents, brokers and insurance agents for other peoples property.

NOTICE TO MARINERS.

Notice is hereby given that a lighted buoy, painted red, and showing a fixed white light, has been placed in fourteen feet of water near the S. W. extremity of Starve Island Reef, on the following (true) bearings and distances:

South end of South Bass Island, N. W. $\frac{3}{4}$ W., 1 $\frac{1}{2}$ miles.

East end of Mouse Island, S. S. W., $\frac{5}{8}$ W., 1 $\frac{1}{2}$ miles.

Starve Island, N. by W., 1 mile

This buoy is numbered "4" and replaces the red can buoy No. 4 heretofore maintained at this position.

THEO. F. JEWELL,

Commander U. S. N., Inspector 10th L. H. District.

It is stated that Milwaukee will require upwards of 800,000 tons of coal to equal the receipts during the season of navigation in 1896. This is equivalent to 10,000 tons per day to November 30. If the deliveries could be made regularly no difficulty would be experienced at the different yards in handling the amount, but such a thing can hardly be expected.

THE DEEP WATERWAY PROJECT—CANAL FROM THE LAKES TO AN ATLANTIC OUTLET.

It may be that some of the readers of the Record are not yet fully acquainted with the steps now being taken to determine the best means of reaching the coast by canalizing from the lakes. Whether this project, if carried out successfully by the general government, would be for the best interests of lake vessel owners it is not our intention to discuss at this time.

The present board appointed to inquire into the undertaking and devise plans for connecting the lakes with the coast, consists of Major Charles W. Raymond, corps of engineers, United States engineer at Philadelphia; Alfred Noble, of Chicago, and George G. Wisner, of Detroit.

This board of engineers, which has held its first preliminary meeting, takes up this proposition, where the "deep waterway commission" left off. The inauguration of the work was the resolution of Congress adopted in March, 1895, which authorized the President to appoint a commission of three persons who should "make inquiry and report whether it is feasible to build such canals as shall enable vessels engaged in ocean commerce to pass to and between the Great Lakes and the Atlantic Ocean, where such canals can be most conveniently located, and the probable cost of the same, with estimates in detail."

This commission, appointed in November, 1895, consisted of James B. Angell, president of the University of Michigan; John E. Russell, of Massachusetts, and L. E. Cooley, of Chicago. Its report was sent to Congress in January of this year, and in the sundry civil bill passed June 4, was an item providing for the appointment of the board of surveys now in session, with an appropriation of \$150,000 for the expenses of the preliminary operations.

The board is directed to survey the routes recommended by the commission, "such examinations to be designated by the President, one of whom may be detailed from the engineer corps of the army, one from the coast and geodetic survey and one shall be appointed from civil life."

Thus far, therefore, the proceedings of the board have little of importance. Major Raymond has been for several years the engineer in charge of the government improvements in the Delaware. He has been a member of the fortifications board of the United States army, and of many boards of river and harbor improvements. He was formerly president of two boards of engineers in the surveys for the great bridge across the Hudson river at New York.

Alfred Noble was formerly resident engineer of the Sault Ste. Marie canal and also resident engineer in the construction of the Mississippi bridge at Memphis. He was also a member of the Nicaragua canal commission, of which Colonel Ludlow was president.

George Y. Wisner was formerly assistant engineer on the Mississippi river commission, and chief engineer of important government work in the harbors of the Gulf of Mexico. He was also a leading figure in the examination of the deep waterways problem at the International Deep Waterways convention held in Cleveland in 1895.

The act of Congress says that these gentlemen shall make "surveys and examinations, including estimates of cost of deep waterways and the routes thereof, between the Great Lakes and the Atlantic tide waters, as recommended by the report of the deep waterways commission."

The most generally accepted route seems to be through the several lakes and their connecting waterways, and the proposed Niagara river ship canal between Lake Erie and Lake Ontario. From the lakes to the seaboard two routes are recommended, one by way of the St. Lawrence River, Lake Champlain and the Hudson river, and the other by way of the Oswego and Oneida rivers, Oneida lake, the Mohawk Valley and the Hudson river.

The report of the commission eliminates the scheme of widening and deepening the Erie canal, and practically commits the government to the construction of a deep waterway along one of the two routes outlined. The board is not directed to make any independent inquiries or investigations of the advisability of the construction of these or other waterways. This has been done by the commission. The use of the Erie canal as a part of the system would leave out Lake Ontario, which the commission insists should not be done, and reports the Erie canal route as undesirable.

The commission recommends that the Niagara ship canal should be first undertaken, and also the widening

and deepening of the connecting channels between the lakes. A moderate control of the level of Lake Erie and of the Niagara river above Tonawanda may be justified in connection with the Niagara ship canal by a dam in the vicinity of Tonawanda, the canal running from this place to Olcott. The policy of the whole undertaking, it is contended, should contemplate the ultimate development of the largest useful capacity, and all works should be planned on this basis and the actual execution should conform thereto. It is deemed practical to develop the work in separate sections so that benefits shall follow closely on expenditure without awaiting the completion of the system as a whole. Complete surveys and examinations are to be made and all needful data to mature the projects to be procured for the controlling of the level of Lake Erie, and projecting the Niagara ship canal, developing the tidal Hudson river and improving the intermediate channels of the lakes, and that a systematic measurement of the overflow of the lake and of the fixed determination of the levels, shall be undertaken.

This preliminary work and the surveys, examinations and reseaches are estimated to require \$600,000 and several years of time. As to the cost of the deep waterways system, the commission has not given out estimates, but the report of Major Symonds, of the corps of engineers, made public recently, estimates that the cost of the most feasible route, which he considers as being by way of the Oswego, Oneida Lake, the Mohawk and the Hudson, to reach the total of \$200,000,000.

The International Deep Waterways Association is of the opinion that the United States should join with the Dominion of Canada in constructing and operating this projected waterway, but it should be remembered that the canals of Canada are completely frozen up during about five months in the year. The Canadian system is a complete one in every other respect and was constructed at a cost of \$60,000,000. These canals average fourteen feet in depth, and this fact alone places them far above the Erie canal, whose present depth is but seven feet, but which will be made nine feet, this work to be undertaken by the state of New York.

Many engineers think with the deepening of the Erie canal and the restrictions regarding its use removed by the State of New York that it will possess the commercial advantages of a ship canal, and then, on the other hand, there are others who think that the United States government should undertake the construction of a canal that will shorten the distance between Lake Erie and the Hudson river and give the vessels more of an opportunity to make quick time on the two lakes.

ABSTRACT OF BIDS

Received for furnishing and placing riprap at Superior Entry Piers, Wisconsin, opened by Major Clinton B. Sears, Corps of Engineers, U. S. Army, at Duluth, Minnesota, September, 15th, 1897.

No. of Bid.	NAME AND ADDRESS OF BIDDER.	For Derrick Rock in Place, about 20,000 tons, more or less (of 2,000 lbs.), per ton.		TOTAL.
		Small Rock in Place, about 11,000 tons, more or less (of 2,000 lbs.), per ton.		
1	McLeod, Campbell & Smith, Duluth, Minn.	\$1.35	\$0.90	\$49,050.00
2	Jacob H. Carlson, Duluth, Minn.	.71	.71	28,400.00
3	Alex. Pearson & A. Frieden, Duluth, Minn.	.83	.83	33,200.00
4	Frederick Davis, Duluth, Minn.	1.04	.729	38,179.00
5	King & Steele, Duluth, Minn.	1.72	.80	58,680.00
6	Porter Bros., Duluth, Minn.	1.18	.85	43,570.00
7	Frederick J. McKeon, Rush City, Minn.	1.03	1.03	41,200.00
8	Duluth Brown Stone Co., Duluth, Minn.	.77	.77	30,800.00
9	Ashland Brownstone Co., Chicago, Ill.	2.23	1.08	76,550.00
10	Heldmaier & Neu, Chicago, Ill.	3.60	.67	111,770.00

NAVAL RECRUITING STATION.

After opening up temporary quarters for the engagement of naval recruits at lake ports, Ensign N. E. Irwin, U. S. Navy, has been directed to move from Bay City to Buffalo and in consequence the station will not be established at Toledo or Cleveland.

It is learned that quite a large number of recruits have been engaged for naval service during the time that Ensign Irwin has been at work on the lakes and it is possible that both Toledo and Cleveland would also have furnished their quota.

RESPONSIBILITY FOR GRAIN SHORTAGE.

The decision of Judge Moer, at Duluth, is of vast importance to vessel owners. The decision relieves owners of vessels from the liability of grain shortage and removes a source of great perplexity. The details of the case as they come from Duluth are:

"In 1890 the steamer Frontenac, owned by the Cleveland Iron Mining Company, the plaintiff in the case was chartered by the firm of Sawyer & Co. to carry a cargo of No. 1 hard wheat from West Superior to Buffalo. The Frontenac was loaded at the Great Northern elevators with what was supposed to be 81,000 bushels of wheat, and bills of lading were issued by the vessel agents, LaSalle & Wolvin, for that amount. When the boat arrived at Buffalo the cargo was found to be 1,502 bushels short. The consigners brought suit against the ship owners for the value of the grain in the United States court at Buffalo, but that court held that as the grain was never put on the boat the vessel owners could not be held. The case was taken to the United States Court of Appeals at New York, and that court reversed the lower court, holding that under the peculiar form of the bill of lading the ship was liable. The vessel owners, therefore, had to pay the consignees the amount of the shortage. They immediately demanded the balance of the wheat or its value from the Great Northern people, but the latter refused on the ground that the wheat was weighed out of the elevator by the state grain department of Minnesota, and that if there was a mistake the state officials were liable and not the elevator.

"The steamboat company, through its attorneys, began an action in the district court at Duluth against the Eastern railway company of Minnesota, the owner of the elevators, to recover the value of the shortage. The defense was the same as that made to the former demand made by the vessel owners, that the state officials were liable. In deciding the case Judge Moer finds that the mistake was mutual between the parties and that the shortage actually occurred. He finds that not having loaded the full amount the boat was entitled to receive, the elevator company was liable, even though the loading was done under the supervision of the state."

This is the first case of its kind ever decided by the courts, and vesselmen and grain shippers all over the lakes will look to it as establishing a precedent.

TRIAL TRIP FAILURE.

During the recent trial trip of the torpedo boat Rodgers in Chesapeake Bay, the crank shaft of the engine broke in three places. The Government requirements for these forgings were—Tensile strength, 58,000 lbs. per sq. in., and an elongation of 28 per cent in test specimens 2 inches long between measuring points. This is very soft steel and the engine being driven very much beyond its capacity in order to obtain the necessary speed, probably overtaxed the strength of the shafting.

The Bethlehem Iron Works Co., of South Bethlehem, Pa., are making shafts for torpedo boats under very much higher requirements, viz: 80,000 lbs. tensile strength, 45,000 lbs. elastic limit, and 26 per cent elongation in test specimens of the same dimensions as above.

The Rodgers was built by the Columbian Iron Works & Dry Dock Co., and although the order for shafting was not given to the Bethlehem Iron Works Co., that firm has now received instructions from the Navy Department to replace all forgings and repair the damages caused by the break down ready for another and final trial trip.

IMPROVEMENTS AT CONNEAUT.

The erection of the ore handling plant on the dock of Pittsburg & Conneaut Dock Company at Conneaut marks another important step in the direction of improved facilities. The machine now being constructed will handle ore more expeditiously than any plant in service.

The builders, a Cleveland company, are satisfied that the plant will easily unload a 6,000-ton ore cargo within a working day, in fact in seven hours, against fourteen to seventeen hours now required to remove a cargo. The fact that the machine is to be operated in connection with the Carnegie railroad, the P. B. & L. E., gives additional interest to the improved ore handling facilities.

The plant consists of twelve legs divided into four groups of three machines each. It is not intended to store ore on the docks, but to put it directly aboard steel cars from the vessel.



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FOG SIGNALS.

Many systems of signals to lessen the dangers of navigation in fog have been suggested. All of them are meritorious from a certain viewpoint, but they fail in practice. The latest is from Prof. E. C. Pickering of Harvard college university, who presents a method of determining the position of a vessel in a fog based upon the velocity of sound. If two fog horns of different pitch be placed at equal distances from the middle of a channel or entrance to a harbor and be sounded simultaneously at regular intervals of about a minute, Prof. Pickering says that a captain of a vessel will be able to find his position with fair accuracy by noting when the sounds of the horns are heard.

If the two sounds are heard at the same instant the vessel will be in the middle of the channel, and if they are heard one after another it would be possible to judge from the interval between the two how much the vessel is out of the middle channel. For vessels passing each other Prof. Pickering suggests that each should whistle or blow the horn or siren as soon as the sound is received from the other vessel. Then, if they are five miles apart, each will whistle every fifty seconds and the distance in miles between the two vessels always can be determined by dividing the intervals in seconds by ten. It is claimed that by placing two different fog whistles on a long steamer, one at the bow and the other at the stern, and arranging that the sounds emitted by both should be heard together by an observer standing at the bow, many collisions might be prevented. Instructions could be given to sailing vessels to keep quiet so long as both signals were heard separately, for then they would be in no danger, but to fire a gun or make other loud noise when both whistles were heard together, for then they would be in front of the steamer. These various methods may be combined indefinitely, according to a circular pertaining to the system, but it is probable that the signals never will be given a trial, as it is said, they are too complicated, the objection to all systems. Therefore, vessels still will be in danger during fogs.

REVERSED THE DECISION.

Supervising Inspector Galway of the Detroit steamboat inspection district, has reversed the decision of the Port Huron local inspectors, Danger and Van Liew, by which the steamer Ira H. Owen was held to blame for the recent collision of that steamer with the Susquehanna off Thunder Bay. Mr. Neff had his license suspended for ninety

days, and made an appeal, with the assistance of an attorney.

Mr. Galway gave the evidence of both sides careful consideration and says he can find nothing in the allegations that shows carelessness or negligence on the part of Mr. Neff in the management of his steamer, nor evidence of a positive nature that would point to a violation of the pilot rules by either steamer. Taking the testimony of the officers and crew of both steamers, which is all there is to pass an opinion upon, it would appear that both boats were proceeding at a moderate speed, as provided in the rules.

"Just prior to the collision," says Mr. Galway, "or at the time passing signals were given and answered, there was no doubt a misjudgment as to the relative positions of the two boats, which was in reality the cause of the collision, but as passing signals are permitted in thick and foggy weather under rule 23 of the pilot law, officers cannot be censured for using them."

From this it appears Mr. Galway holds the pilot rules at fault for allowing passing signals in fog. The best authorities in the country have condemned this practice, and the international marine conference decided them to be dangerous. Had it not been for the signals, in this particular case, according to the foregoing, both boats would have been at a standstill or going so slowly that they could have had time to avoid each other after sighting, or at best, had they come together the damage would have been trifling. The fact that one or both did not sink as it was is owing to their water tight collision, bulk-heads and their striking head on, and their being under check, though not as completely under control.

EASTERN FREIGHT REPORT.

The usual weekly freight report as furnished the Record by Messrs. Funch, Edye & Co., of New York, states that the freight market for grain in entire cargoes is quiet, and the amount of tonnage offering at the moment is in excess of shippers' wants, both as regards small vessels to Cork f. o. b. and large boats for direct ports. Owners have not, however, reduced their asking figures of 3s. 7½d. @ 3s. 9d. to Cork f. o. b. and 3s. 1½ @ 3s. 3d. respectively for October loading. Little demand for Cork f. o. b. tonnage appears to exist for November-December boats; for January the established rate is 3s. 6d., with large boats offering during all the remaining months of the year at 3s. and 3s. 1½d. Charterers are less inclined, however, to limit themselves for direct ports to full grain cargoes, and are beginning to insist on at least moderate quantity of general cargo. Berth freights have latterly been in slightly better request for U. K. ports, and are quotable from ½d. better. Continental freights show no advance. Deal freights are advancing, and 55s. could be obtained from St. John, N. B., whilst timber freights from the Gulf are neglected, owing to the high rates demanded by owners. Boats for cotton continue being offered but sparingly, and the demand from all the cotton ports has resulted in some advance all along the coast. The yellow fever epidemic in New Orleans, unless promptly checked, may create a change in this respect in the Gulf, by overcrowding Galveston with tonnage open for either port. The demand for case oil steamers is active, but charterers are disinclined either to make higher offers or to entertain tonnage not in a near position.

The business in sailing vessels during the week just past has been rather light, and confined mostly to the oil trade, as shown by our subjoined list of charters. Rates obtained for cases show little change, but less urgent demand. In other lines we have nothing of particular interest to report.

FOG REPORTS.

The hydrographic office U. S. N., has issued a fog table for different stations on the lakes, showing the average duration and frequency of fogs at each station for the past six years, between April 1 and Dec. 1. Lake Michigan leads all the other lakes in foggy weather, and Ludington takes first place among the stations, with an average of 641 hours of fog for the season. Cleveland reports an average of 130 foggy days, more than at any other port, but the number of hours' duration is 77 below the record of Ludington. Presque Isle, Lake Erie, has only 60 hours of fog per annum. The Detroit river proves itself a safe stream. At Bar point there is only 107.5 hours of fog per annum, and at the Detroit river lighthouse, 179 hours. Chicago records 264 hours; Buffalo, 327 hours; Duluth, 484, and the Soo entrance, 501.

LAW, RULES AND REGULATIONS

FOR THE CANALS AND CHANNELS IN THE HARBOR AT DULUTH, MINN., AND SUPERIOR, WIS.

1. No vessel shall be moored to any entry pier.
2. No material of any kind shall be unloaded from the entry piers, except for the use of the United States, unless by special permission of the Engineer Officer-in-Charge in each case:

3. Vessels shall not anchor in the entrance canals, or in any of the navigable channels, except in the harbor basins, and then only when not in the way of passing vessels.

4. Vessels and rafts shall not be anchored or otherwise fastened where they will be liable to swing into the channels by reason of a wind or current.

5. Vessels and rafts shall take great care not to run into, strike, rub against or otherwise injure the entrance piers, buoys or beacons in the harbor.

6. While dredging operations and the rebuilding of the piers are going on, all vessels will slow down to six miles an hour, while passing said piers, or the dredges, upon being requested to do so by the display or waving of a red flag, or red lantern.

7. Dredges and attending scows and tugs are expected and required to give half the channel for passing vessels and rafts, and the latter are required to do the same when passing the dredges or other craft.

8. The signal for opening the draws of all bridges will be three long blasts of the whistle, or horn where the vessel is not navigated by steam power, and will be given in ample time when approaching the bridge. The only exception to this is when a vessel going into St. Louis Bay from Superior Bay intends to pass through the Wisconsin draw of the Northern Pacific Bridge; it will then add one short blast after the three long blasts.

9. Upon such signal being given, the keeper of the drawbridge which, if signaled, will open it promptly and fully, and will give all vessels right of way over all trains, cars, wagons, foot passengers, etc.

10. Where there are two or more channels leading to a given point, in one of which improvement work is going on, it may be temporarily closed to navigation by the Engineer Officer-in-charge, after due notice.

11. All rafts shall enter or leave the harbor by the Wisconsin entrance, and no rafts will be permitted to use the Duluth Canal.

12. All rafts in passing the bridges will use the rafting spans, and will not be permitted to go through the draw span openings.

13. Rafts at all times will be handled by sufficient number of tugs to enable them to avoid obstructing the channels, and to give half the channel to passing vessels, or in passing dredges.

These regulations shall be in force from and after September 1, 1897.

G. D. MEIKLEJOHN.

Acting Secretary of War.

Official:

CLINTON B. SEARS,

Major, Corps of Engineers, U. S. A., Engineer Officer-in-Charge, of Duluth-Superior Harbor.

HARBOR IMPROVEMENTS.

The monthly report of Col. Jared A. Smith, Corps of Engineers, U. S. A., on the harbor operations in the Cleveland district indicates that the contract work on the various harbor works of the district is being pushed rapidly, and that good progress is being made on all of them.

During the month of August the continuous contract work on the superstructure of the west breakwater of Cleveland harbor was continued with as large a force of men as could well be employed. Colonel Smith reports the work in good shape.

Toledo harbor—Three dredges were employed during the month, and 159,906 yards of material were removed from the outer section of the straight channel and 2,627 yards from the Maumee River at the lower crossing.

Sandy harbor—During the month 350 feet of jetty from Cedar Point were completed, making a total of 945 feet completed harbor.

Huron harbor—Deepening of the channel by dredging was begun on August 11, and 9,347 yards of material were removed during the month.

Black River harbor—The work of rebuilding the west

pier is progressing rapidly. During the month dredges removed 236 feet of the submerged old pier.

Ashtabula harbor—Two cribs built at Cleveland were towed to position and sunk in the breakwater. The work of construction of the new breakwater is progressing satisfactorily.

TO CANAL ACROSS MICHIGAN.

Fully sixty years ago plans for a ship canal connecting Lake Erie with the southern end of Lake Michigan were under the consideration of capitalists and legislators. Now the project is again under way, and Mr. A. Stewart Appleton, representing the ship canal company, will bring the matter before Congress.

"The proposed ship canal," he says, "is to extend from the southeastern corner of Lake Michigan to the western end of Lake Erie, near Toledo, and will cut off about a one thousand miles of travel the distance around to Chicago, through the straits of Mackinac. Moreover, it will add six weeks of navigation at each end of the season. The original cost of the canal was estimated at \$30,000,000, but we have cut that down to \$5,000,000. Instead of digging a canal 18 or 20 feet deep, we find that nine feet will be sufficient, owing to the invention of a St. Louis man named Lucas. He has invented a ship of six-foot draught which, by the contrivance of a 20-foot steel centerboard, is rendered perfectly seaworthy in heavy weather. Ships of this kind will be used in the canal. We expect that congress will give us an appropriation. Last year the canal and railroad committee considered the matter, and every member was personally pledged to the support of a bill providing for an appropriation. The bill will be ready for presentation when congress convenes.

NORTHERN LINE PASSENGER STEAMERS.

The steamers of the Northern Line have undoubtedly made money this year, though it is said to be the first time they have come out much ahead of their heavy expenses. On round trips the sister ships have carried more than 1,000 people at times. Some of these have been bound to and from Mackinac island, but the majority have been billed to and from Duluth and the Northwest. Between Detroit and Mackinac Island this line and the Detroit & Cleveland line have been charging the same rate of transportation, which is a cut in each instance under last year. The fact that these two steamers have done so well this year gives rise to a rumor that additions will be made to the fleet, within two years. There is probably not the slightest foundation for this report. They have both such great passenger capacity—they were built for that and nothing else—that they are sufficient to care for the traffic for five years to come. Then, again, it is possible that next season may not equal this. That 1897 has been an excellent year is no guarantee that all that come after it will be as good. Additional tonnage would in that case be a loss. They have not been uncomfortably crowded and there has been no complaint, while, the Northern Line steamers did a good business. Also that each year patronage is improving and, furthermore, it is simply a question of time when more facilities and greater capacities will be required to meet the growing demands of the passenger trade on the lakes. This time question though is beyond the knowledge of even the best informed men on the lakes.

LAKE CARRIERS' MEETING.

A meeting of the executive and finance committee of the Lake Carriers' Association was held at the office of Capt. James Corrigan, on Wednesday. President James W. Millen of Detroit presided and Capt. George P. McKay acted as secretary. The following action was taken.

"Whereas at the last annual meeting of the Lake Carriers Association Mr. J. C. Gilchrist was elected a vice president and was placed on various committees, but has failed to obtain membership by putting in his boats and paying the annual assessment; therefore, be it

"Resolved that the office of vice president and the committee places to which he was elected are hereby declared vacant and the agents of this association are instructed to furnish no men or accommodations to any of Mr. J. C. Gilchrist's vessels this season and that the secretary request Mr. Joseph C. Gilchrist to return the wages, cards and any other matter of the association, and that a copy of the above action be furnished to the press by the secretary."

SOMETHING FRAUDULENT.

The United States district court has decided that the late George W. Brown, of Sault Ste. Marie, defrauded the general government with a forged deed when he sold the island at the lower end of the new Poe lock. The deed from Oshawana, chief of the Chippewas, to Brown is held invalid, and Brown, having no title, conveyed nothing to Uncle Sam for the \$10,000 he received.

Heirs of Oshawana contested the conveyance some years ago, but lost the suit. Now W. B. Cady and J. C. Donnelly, for other heirs, have won. Manager Clergue, of the Soo Water Power Co., was putting up the funds for the fight. The island is said to be worth \$50,000 now, which the government must pay or else the Soo Water Power Co. will buy it. Meanwhile Brown is dead and beyond the reach of Uncle Sam.

GREAT COAL SHORTAGE.

Chicago, Milwaukee and the head of the lakes, and nearly every intervening port, is sadly in need of soft coal at the present time. Chicago is considered more than 1,000,000 tons short, and she has been compelled, from time to time, according to current report, to call on Duluth for enough to help her out. Milwaukee is not only short of soft, but of hard coal as well. Before the end of navigation 700,000 tons of hard coal must be carried there, if her needs are to be adequately supplied, but it is not likely that much more than half that amount will reach there. At the present time soft coal is selling at \$3.50 on the tracks at Milwaukee, which is \$1.50 above the normal wholesale price.

At Duluth there is but 60,000 tons of hard coal on the docks, where there should be 1,000,000 tons and fully 600 boat cargoes, or 1,000,000 tons, will have to be taken there before the close of navigation or she will fall short.

LAKE FREIGHTS.

There is now a brisk demand for tonnage to carry coal and an indication of a slight advance in rates, as one charter was reported at 25 cents to Milwaukee and the same for the north shore of Lake Superior, though the all-round figure may still be quoted at 20 cents.

The ore rates are as last week and shows little or no change; 70 cents Two Harbors to South Chicago; 65 cents from Marquette, but there is considerable delay at discharging ports on account of a scarcity of railroad cars to carry away the ore.

Wheat from Duluth is now at 2 cents, but 2½ cents has been paid. The rate holds steady at Chicago—1½ cents on corn to Lake Erie. There is, however, a better feeling regarding freights among vessel owners and they have still hopes of getting a fair living rate of freight for all cargoes before the season gets much farther along. Lumber from Duluth to Buffalo—Tonawanda has gone up one shilling and there has been considerable chartering done at the higher rate.

THE OLD CLIPPER SHIPS.

From, or under the above caption, Clifford F. Lovell says that the famous passage of 76 days and four hours from San Francisco to Boston, which was made in the year 1860, by the Northern Light, has never been equaled by any sailing craft afloat. Northern Light was afterwards put to trade between New York and London and made some of the fastest voyages across the Atlantic ever made under canvas, frequently beating the steamers of that date, which left port simultaneously with her. At the time of the famous yacht race across the Atlantic between the Henrietta, Fleetwing and Vesta, which was won by the former yacht, owned by James Gordon Bennett, jr., of New York, the Northern Light, which had been held for a day or two to try conclusions with these famous yachts, reached the European coast 13 hours ahead of the winner.

She lies now at the bottom of the Atlantic ocean, about 200 miles out from the English channel. One terribly dark and stormy night, when she was bound for New York with a dead fair wind and carrying all the canvas she could lug, she struck a French brig square amidships. This latter vessel was bound for Havre, and was "hove to" in the gale without any light whatever in her rigging to indicate her presence. She was seen just an instant before she was struck, but too late to change the course. The Northern Light broke her in two, and passed completely through and over her. She succeeded in rescuing all of the crew but one man, who was killed in the col-

lision. After the rescue it was found that the Northern Light herself was so badly injured that it would be impossible to keep her afloat. The next forenoon at 11 o'clock she went to the bottom with every flag flying. My father with the crew, together with the rescued men of the French brig, succeeded in reaching the Irish coast in open boats after several days of severe hardship. This ended the career of one of the most splendid ships that ever bore the American flag. She was known in Europe and America as the "Queen of the Clippers," and occupied much the same position in trans-continental service in those days as do the beautiful twin screw record-breakers of today.

A ST. PAUL FARMERS' CONVENTION.

The first address was by B. F. Candage of Massachusetts on "The value of river and harbor improvements and shipping to agriculture." Mr. Candage said in part:

"It is popular in some quarters to inveigh against railroads, and we admit that some have been grossly mismanaged, but how shall we get on without them? We cannot go back to the ox team and stage coach any more than we can call our honored ancestors from their graves to direct our present affairs.

Freight rates are often of controlling importance to the farmer, and nearly so to the consumer of his products, as they determine the profit or loss to the farmer and the price to be paid by the latter. Fortunately on some routes there are competing lines of transportation to keep rates within reasonable bounds; otherwise the producer and consumer would be at the mercy of the corporation holding the monopoly. This is illustrated by comparing the all-rail freights from the West to the seaboard cities of the Atlantic with those by way of lake and canal. From Chicago to New York or Boston is a distance of 1,000 miles, and from thence to Liverpool 3,000 miles, or three times greater, and yet steamship rates across the Atlantic are on the average but one-third of the all-rail freights from Chicago to our coast, while to be equal would increase the ocean rates nine times.

It is an undeniable and well known fact that waterborne freights are and always have been cheaper than any other. The reason is obvious, for nature furnishes and keeps in repair the ocean roadbed free to all who choose to use it. Were it not for the lake and canal transportation that competes with the railroad in summer and keeps the rates down, the railroads would control the transportation between the West and the Atlantic coast and could then regulate rates to suit themselves without reference to the consumer, the producer or anyone else.

Therefore, it is for the interest of the consumer and producer to urge the United States government to improve waterways on lakes, rivers and canals, and to no class would such improvements be more helpful than to the farmer."

Under the head of shipping, Mr. Candage said:

"The country with a seacoast like ours can not expect full enjoyment of prosperity without a merchant marine that shall fly our flag. It is estimated that \$300,000,000 in gold is paid annually to foreign ship owners for carrying our foreign commerce, one-half of which at least belongs to us by right if we were in a position to take it. If we had been in receipt of this \$150,000,000 annually for the past decade does anyone suppose that we would have been called on to pass through the depression of the past four years?"

OPPORTUNE ADVICE.

Col. Lydecker, Corps of Engineers, U. S. A., is not satisfied with the directions now followed by vessel masters in passing through Ballard's Reef channel and has issued the following for their benefit.

Deep-craft vessels passing through Ballard's Reef channel should keep between the Grosse Ile range line and the gas-buoy marking the west side of the channel. If they follow the Duff & Gatfield range at Amherstburg they will pass to the eastward of the Grosse Ile range and be led over boulders having but little more than 16 1-2 feet of water over them, or even less where the contractor's plant may now be at work. Special care should be taken not to pass over points to the eastward of the Grosse Ile range at which temporary buoys or lights have been placed by the contractor now at work in that channel, as they mark the locations most dangerous to navigation.

H. C. BURRELL,

Marine Reporter.

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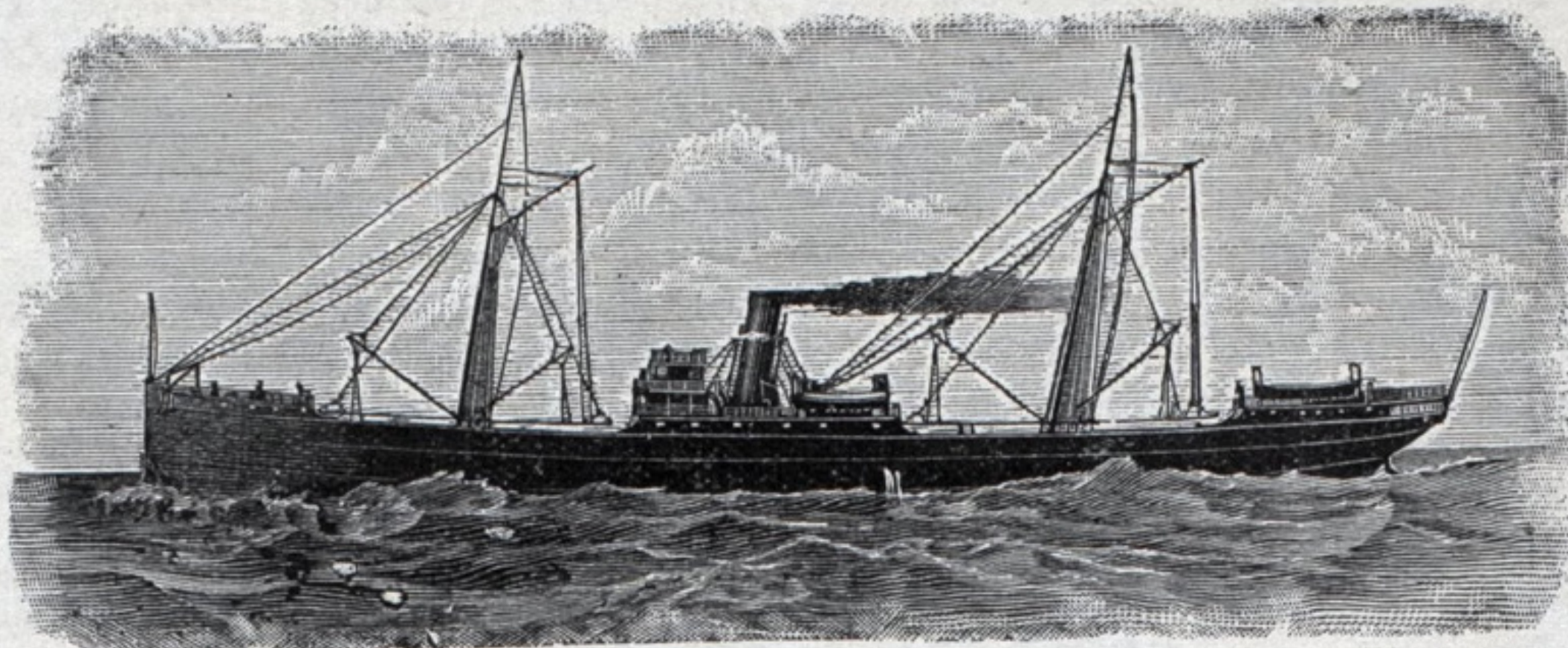
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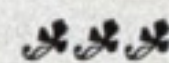
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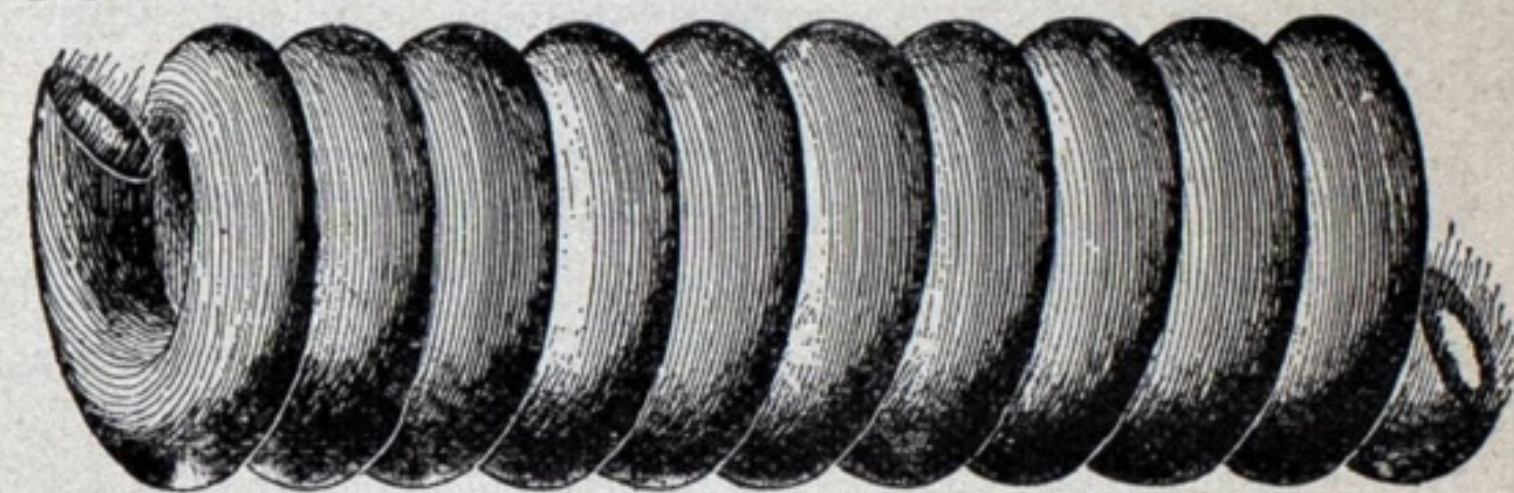
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CHICAGO, ILL.**LAUNCH OF THE BERMUDA.**

Captain James Davidson successfully launched the big wooden steamship Bermuda on Saturday afternoon at 4:30 o'clock and the new ship, decked in flags and bunting, presented a very pretty sight as she slid down the ways.

The Bermuda is intended for an all-around trade, but is specially adapted for the Welland canal trade, and is one of the largest ships that can go through the canal. The new steamer is 240 feet long, 41 feet beam, and 20 feet depth of hold, but while having between-deck beams in place has no between decks laid.

It is expected that the Bermuda will carry 70,000 bushels of wheat through the Welland canal on the regular draft. She has double steel keelsons, steel cords, steel arches and is diagonally strapped as well. She has all of the latest and most modern improvements, including the Williamson steam steerer, Providence steam windlass, steam capstan, steam dock hoister and pumps, and patent stockless anchors.

The engines are of the compound type, with cylinders 21 inch and 42 inch by 30 inch stroke. The boiler is steel, of the Scotch type, and is 12 feet in diameter by 12 feet in length. The cabins are all in the hardwood cabinet finish. The steamship Bermuda rates A1* in the Inland Lloyds Insurance Register. The steamer is now ready for a charter and she has the careful finish of details and general fine model which characterizes all of the Davidson vessels, especially of those built within the last few years, during which time there has sprung up a desire to more completely finish and equip cargo steamers.

SAULT RIVER RULES.

Capt. Shoemaker, of the revenue cutter service, has promulgated the additional instructions and regulations for the navigation of the St. Mary's river, approved by the Secretary of the Treasury. They were made necessary after a trial of the regulations issued last year, and are formulated for the better protection of vessels passing through the Dark Hole. They are as follows: Hereafter

whenever a steamer bound down the St. Mary's river in the day time enters the Dark Hole a white flag will be displayed on a pole at Johnson's Point. Sailors' Encampment, in said river, until the steamer is abreast of Johnson's Point. And whenever a steamer having a vessel or vessels in tow, bound down in the daytime, enters the Dark Hole a white flag over the red flag will be displayed on the pole until such towing steamer is abreast of said point.

Whenever a steamer bound down said river at night enters the Dark Hole a white light over a red light will be displayed on said pole and whenever a steamer bound down at night having a vessel or vessels in tow enters the Dark Hole a white light with two red lights under it will be displayed on the pole. No flags or lanterns, however, will be displayed for tug boats without tows or for sailing vessels.

The rule requiring vessels to sound one long blast of the whistle at Rains' buoy and Everen's point will remain in force.

NEW WHITE STAR LINE STEAMERS.

A report has been sent out that the White Star Line had four steamers now building at the yards of Harland & Wolff, of Belfast, of the type of the freight and passenger steamer Cymric, nearly completed. The White Star Line announced when it gave out its account of the Oceanic last winter that it had arranged with Messrs. Harland & Wolff for 103,000 tons of new ship property, and it is thought likely that the company contemplates building a fleet like the Cymric for the New York trade, which would permit them to compete for the intermediate class of travel for which the Wilsons & Furness-Leyland and Atlantic Transport Lines are now reaching out. The Cymric is to be a 12,000-ton boat and considerably longer than the Georgic, which is the largest of the company's freight steamers now in the New York service. The Georgic, however, will be a larger freight carrier as she has practically no passenger accommodations.

TRANSCONTINENTAL TRAFFIC.

As the Siberian railway nears completion Canadians are beginning to be more interested in the scheme for a trunk line from Portland, Ore., by way of Vancouver, through British Columbia, and Alaska to Bering Sea to connect with the trans-Siberian railway across Bering strait. At present it requires from two to three months for a tour around the world, except for speedy travelers, but should the American route to Bering Sea ever become an accomplished fact, the following table sent out by the Chicago, Milwaukee & St. Paul railway, shows how globe trotters starting out from Chicago could "do" the world in a trifle more than a month.

Chicago to Portland	2,374	3	8
Portland to Bering strait	2,864	5	10
Bering strait to Irkutsk	3,200	6	16
Irkutsk to St. Petersburg	3,670	7	15
St. Petersburg to Berlin	983	..	16
Berlin to Paris	667	..	8
Paris to London	258	..	8
London to Liverpool	202	..	4
Liverpool to New York	3,068	5	8
New York to Chicago	912	1	..
Total ..	18,198	31	20

The present great interest in Alaska will help to give impetus to the proposed railway, though by the time it is built, if ever, the greater part of the gold of the northern El Dorado will probably have been taken out.

Chief Naval Constr. Hichborn has issued the following statement in regard to the degree of completion of vessels under construction: Battleships—Kearsarge, 41½ per cent; Kentucky, 41 per cent; Illinois, 20 per cent; Alabama, 21 per cent; Wisconsin, 14 per cent. Gunboat—Princeton, 90 per cent. Torpedo Boats—Rodgers, 96 per cent; Winslow, 87 per cent; Rowan, 80 per cent; Dahlgren, 4 per cent; T. A. M. Craven, 4 per cent; Farragut, 6 per cent; Davis, 52 per cent; Fox, 45 per cent; Morris, 0 per cent; Talbot, 40 per cent; Gwin, 40 per cent; Mackenzie, 46 per cent; McKee, 18 per cent; No. 19, 0 per cent; No. 20, 0 per cent; No. 21, 0 per cent. Submarine Torpedo Boat—Plunger, 60 per cent.

VISIBLE SUPPLY OF GRAIN

As compiled for The Marine Record, by George F. Stone, Secretary Chicago Board of Trade.

CITIES WHERE STORED.	WHEAT. Bushels.	CORN. Bushels.	OATS. Bushels.	RYE. Bushels.	BARLEY. Bushels.
Albany		75,000	50,000		
Baltimore	1,098,000	1,339,000	423,000	113,000	
Boston	69,000	845,000	102,000		
Buffalo	489,000	1,644,000	280,000	51,000	576,000
afloat					
Chicago	2,164,000	17,241,000	3,117,000	685,000	111,000
afloat					
Cincinnati	7,000	6,000	44,000	2,000	12,000
Detroit	310,000	35,000	32,000	91,000	13,000
afloat					
Duluth and Superior	1,964,000	250,000	125,000	526,000	253,000
afloat					
Indianapolis	247,000	58,000	56,000	1,000	
Kansas City	1,587,000	273,000	113,000	34,000	
Milwaukee	55,000	381,000	30,000	61,000	98,000
afloat					
Minneapolis	1,988,000	93,000	585,000	22,000	4,000
Montreal	233,000	43,000	204,000	25,000	23,000
New York	982,000	4,777,000	2,225,000	274,000	21,000
afloat	42,000	249,000	41,000		
Oswego		136,000	3,000		20,000
Peoria		87,000	43,000		
Philadelphia	729,000	829,000	96,000		
St. Louis	1,819,000	606,000	338,000	200,000	
afloat	52,000	36,000			
Toledo	328,000	584,000	889,000	214,000	
afloat					
Toronto	21,000		3,000		1,000
On Canal	216,000	1,299,000	71,000	83,000	120,000
On Lakes	2,663,000	2,843,000	1,868,000	43,000	142,000
On Mississippi	71,000	8,000	15,000		
Grand Total	17,140,000	33,737,000	10,753,000	2,425,000	1,394,000
Corresponding Date, 1896	49,655,000	13,621,000	8,460,000	1,964,000	1,338,000

NOTES.

Official number were assigned during the week by the Bureau of Navigation, Treasury Department, to the steamer Robert W. Wilmot, 478 gross and 325 net tons. She was built by F. W. Wheeler & Co., at West Bay City and hails from Pittsburg, Pa.

Supt. S. I. Kimball, of the life-saving service, has returned to Washington from the lakes, where he visited Grand Marais. While there he purchased a site for the new Grand Marais life saving station. He says that he is

entirely satisfied with the location, and regards it as an admirable one. The superintendent believes that this station at Grand Marais will be one of the most important on Lake Superior.

The first move for the better defense of New York harbor was made when Maj. Smith S. Leach, Corps of Engineers, U. S. A., filed with the Secretary of State, through Col. Griffith, the official papers of acquisition of Plum Island, in Long Island Sound, to be used as a portion of defense for that harbor. Gov. Black, on behalf of the state, signed the deed of cession. The Government purchased the land from Abram S. Hewitt and wife.

The U. S. S. Philadelphia, now at Honolulu, is to come home as soon as the necessary orders can reach her. This will leave the Bennington as the sole representative of the United States Navy at Honolulu until the Baltimore reaches that port. It has been found necessary to adopt this course in order to get a crew to man the Baltimore, now at Mare Island. With the men from the Philadelphia it will be possible to man the Baltimore and send her back to Hawaii.

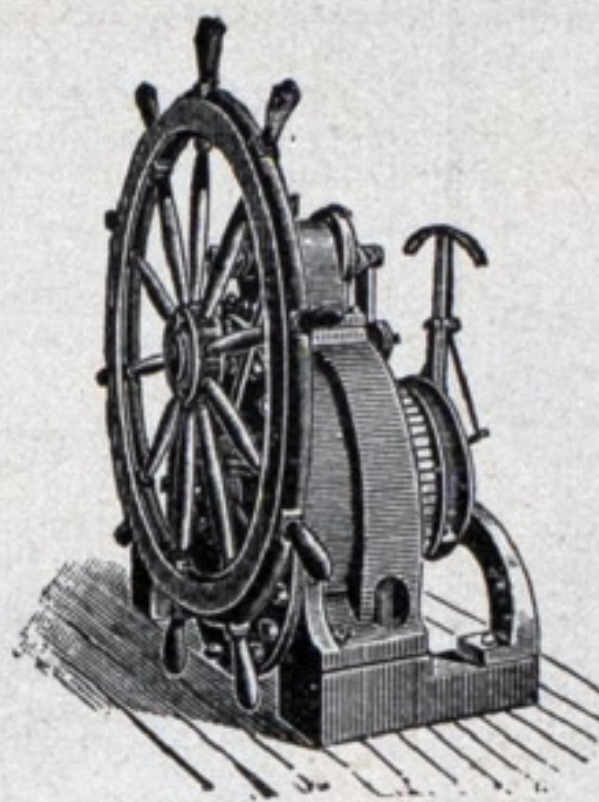
More than \$3,000,000 will be required to establish the proposed Government armor plant. This is the estimate of the Board after it had considered all costs, including the cost of a plot of ground. There is a possibility that this amount may be slightly decreased, by reason of improvements made in the methods of manufacturing armor over those formerly employed. Mr. Herbert, while Secretary of the Navy, submitted an estimate to Congress stating that a plant could be purchased for \$1,500,000. It is the opinion of some of the members of the Board that it would be advisable for it to go to Europe and inspect the European plants, and it would then be in a better position to make a conservative estimate.

Judge Marsden C. Burch, of Grand Rapids, has been designated by the attorney general to prepare the briefs and defend the interests of the government in the case brought by the Cramps, of Philadelphia—the shipbuilders—before the court of claims. This is a very important assignment, as the cases involve something more than a mil-

lion of dollars. Judge Burch has been chosen because of his extensive legal experience, and the confidence reposed in his ability by the department.

The St. Lawrence system of canals is now being completed to a uniform depth of 14 feet; this will be consummated by the end of next year, which will afford uninterrupted navigation from the Straits of Belle Isle to the head of Lake Superior, a distance of 2,384 miles, of which about 72 miles are canals. The locks range from 200 to 270 feet long by 45 feet wide. There is also a canal system to overcome the difficulties of the River Ottawa between Montreal and Ottawa. The Rideau Canal, which was built by the Imperial Government in 1827, opens navigation between Ottawa and Kingston. In Nova Scotia the St. Peter's Canal connects St. Peter's Bay with the Bras d'Or Lakes. The first canal was constructed at Sault Ste. Marie, Lake Superior in 1797. It was promoted in order to enable the Hudson's Bay Company to get their row-boats with supplies from Lake Huron into Lake Superior, and thus avoid the St. Mary's Rapids.

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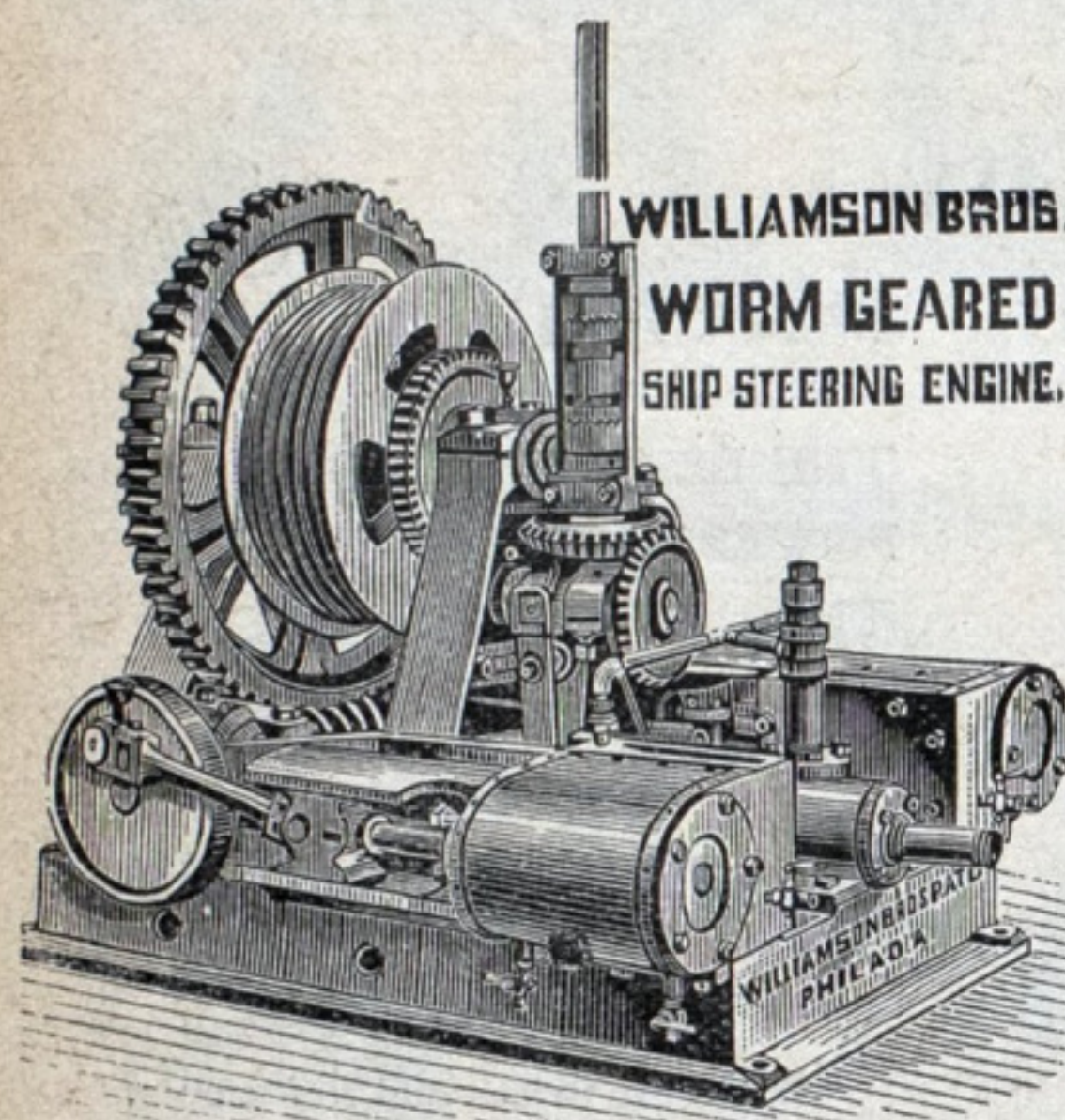
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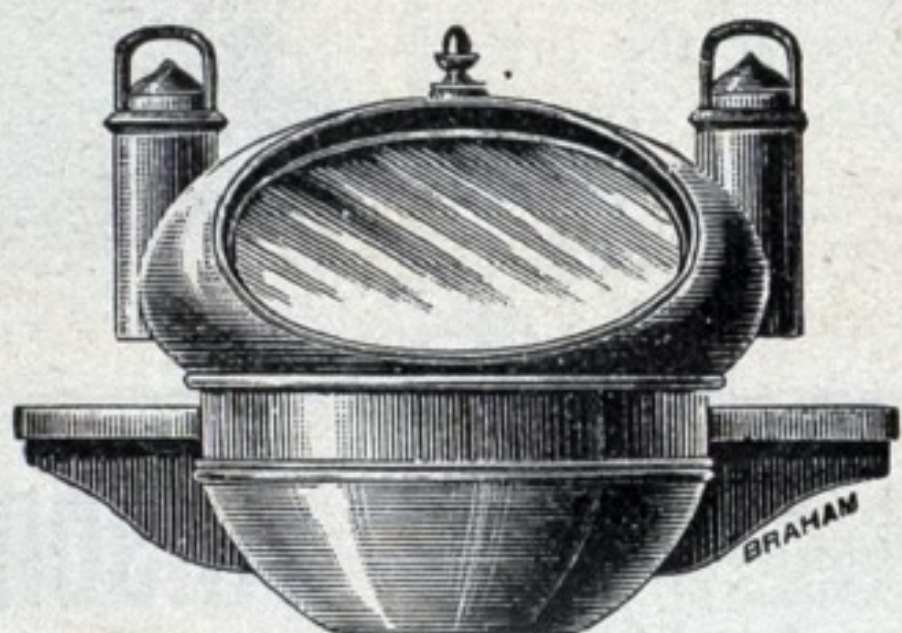
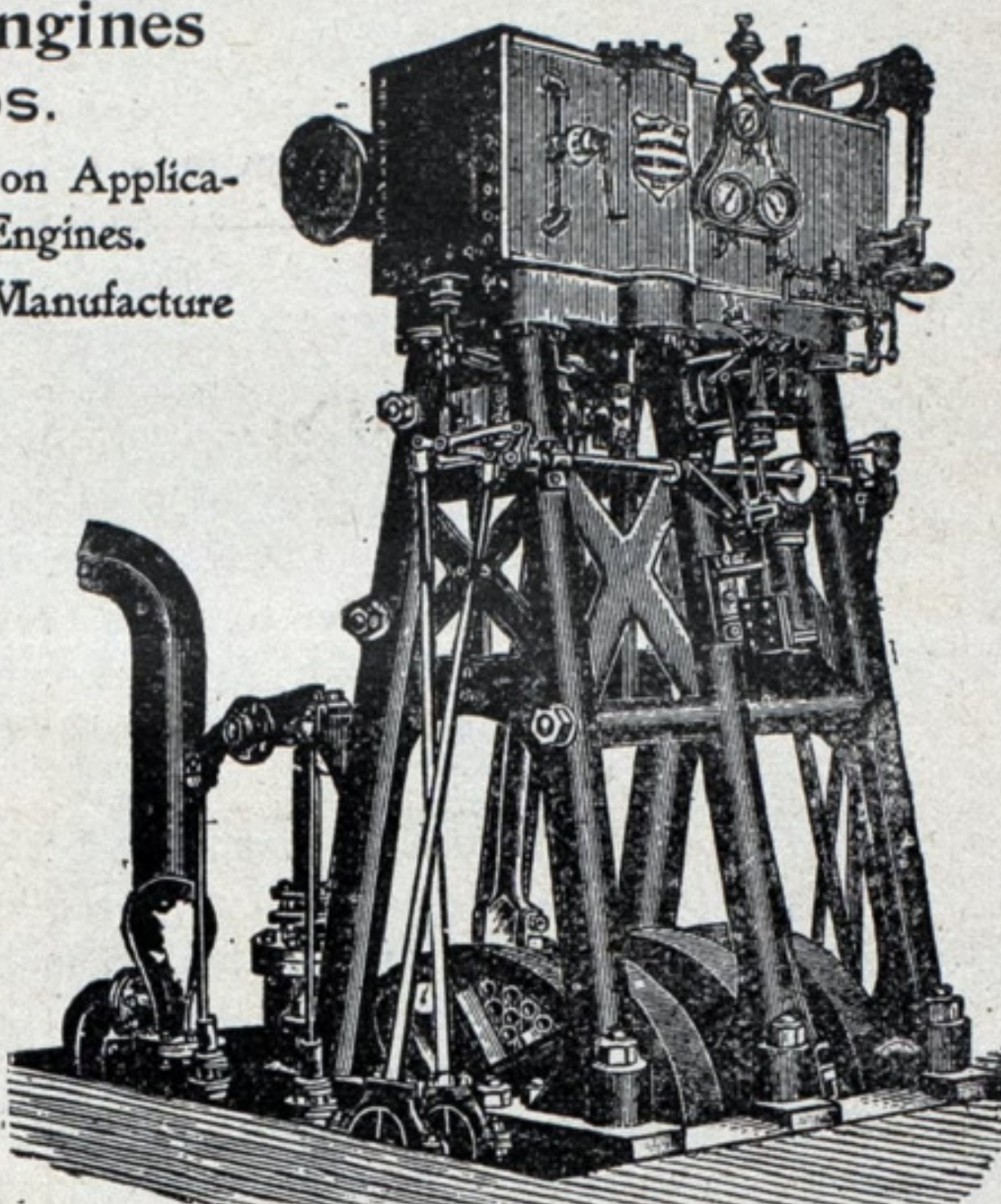
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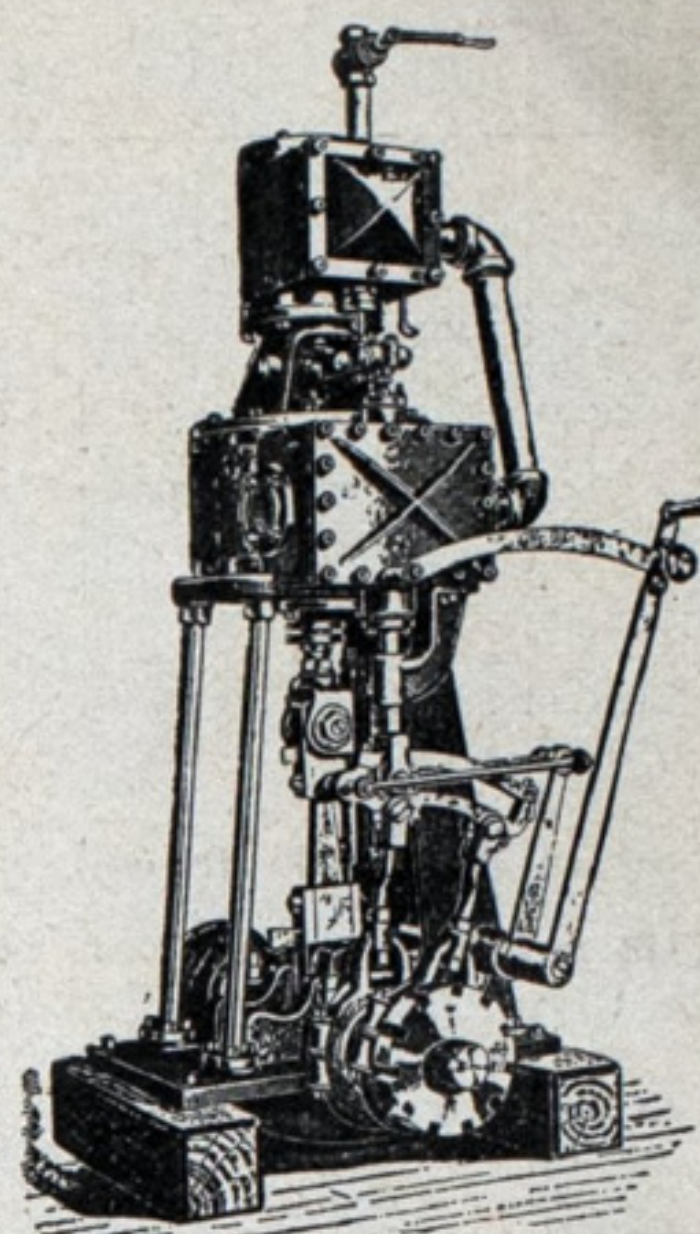
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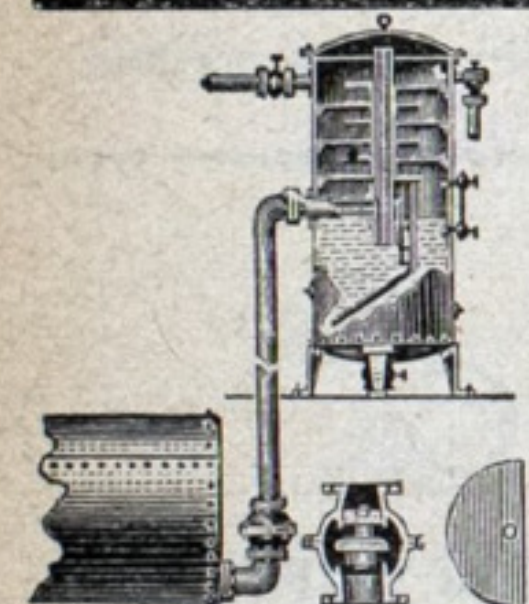
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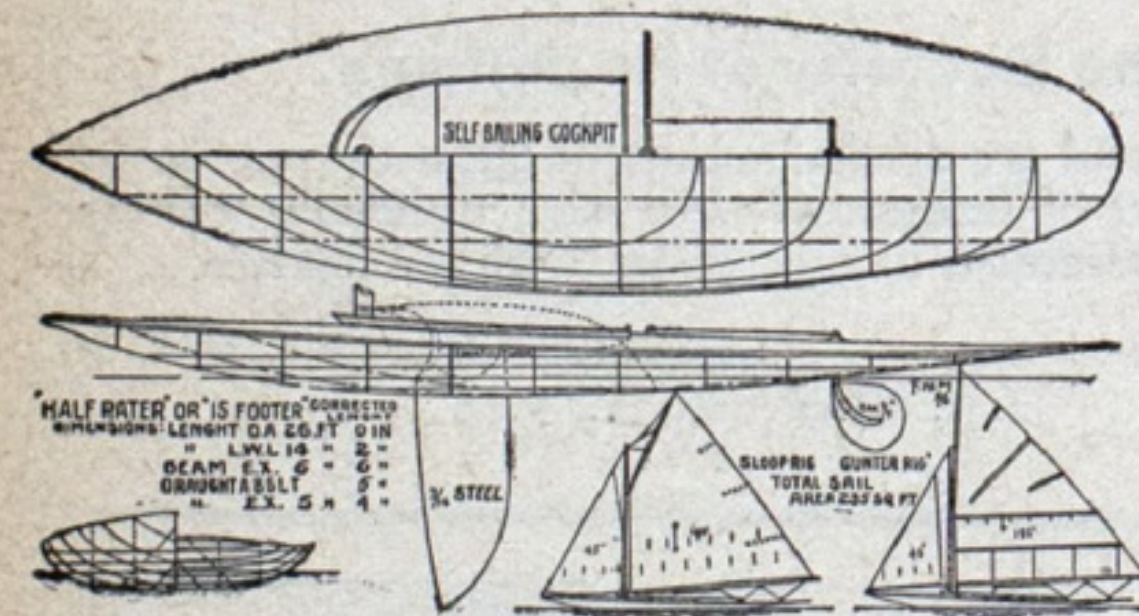
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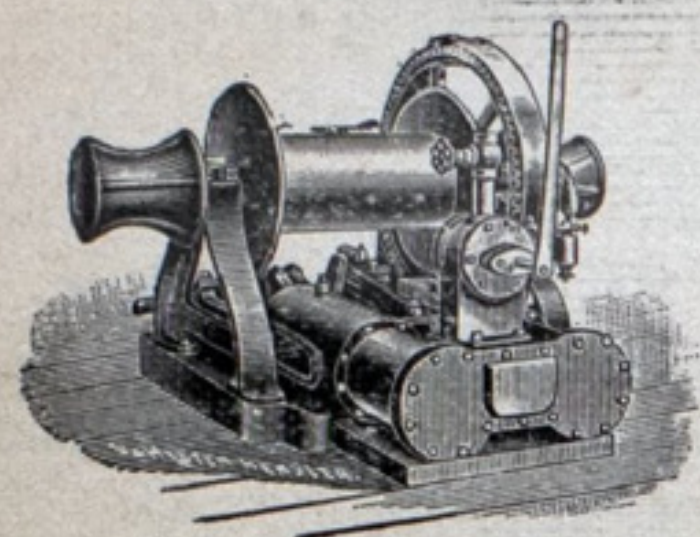
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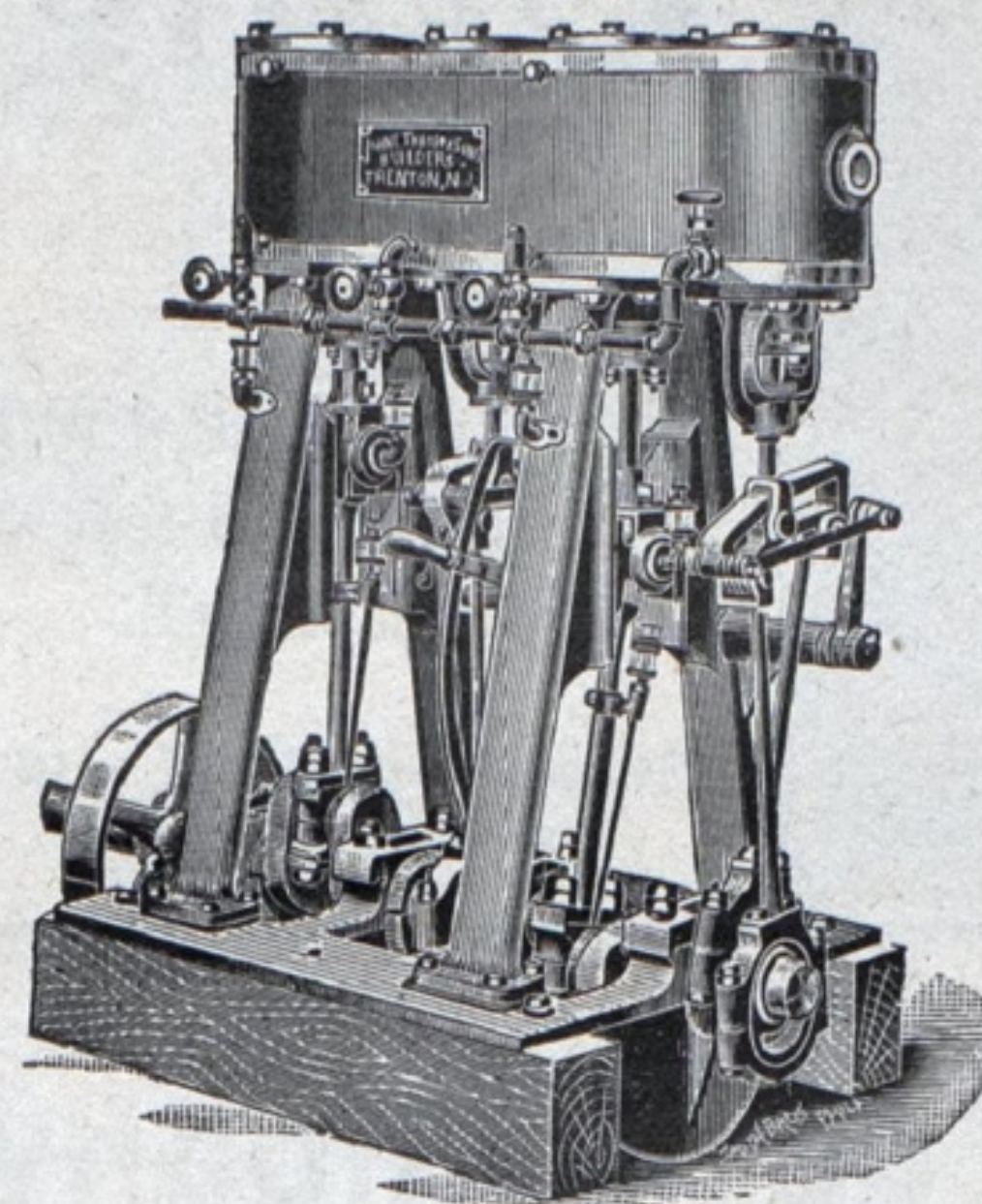
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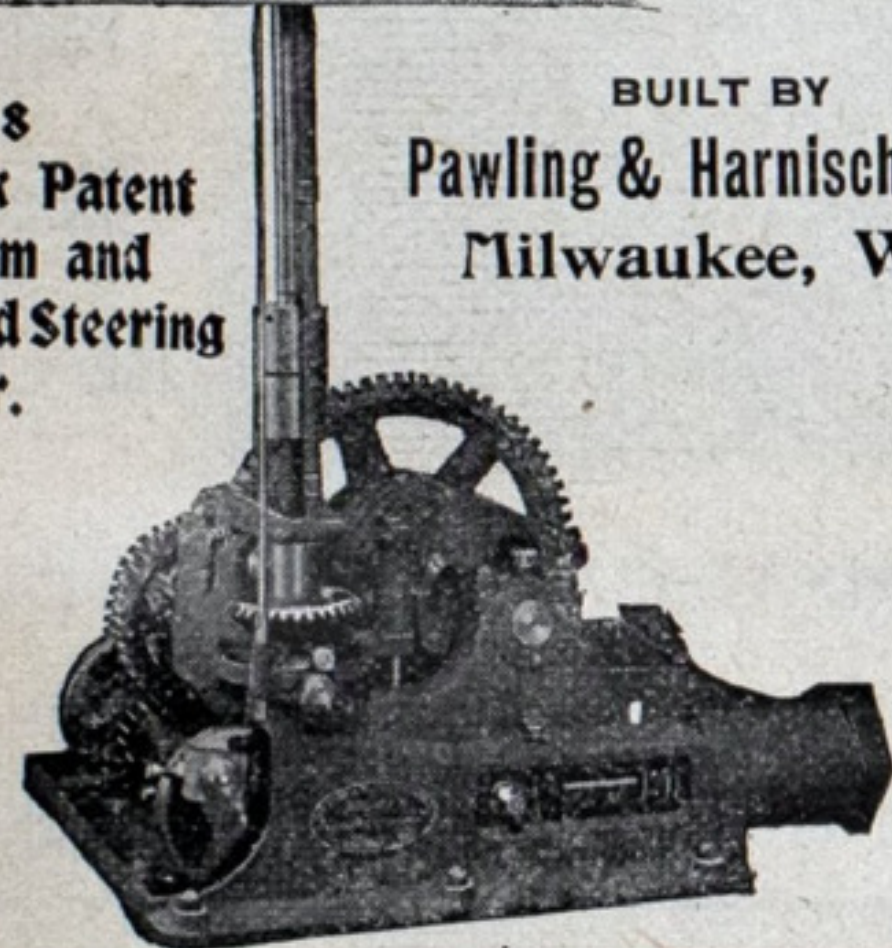
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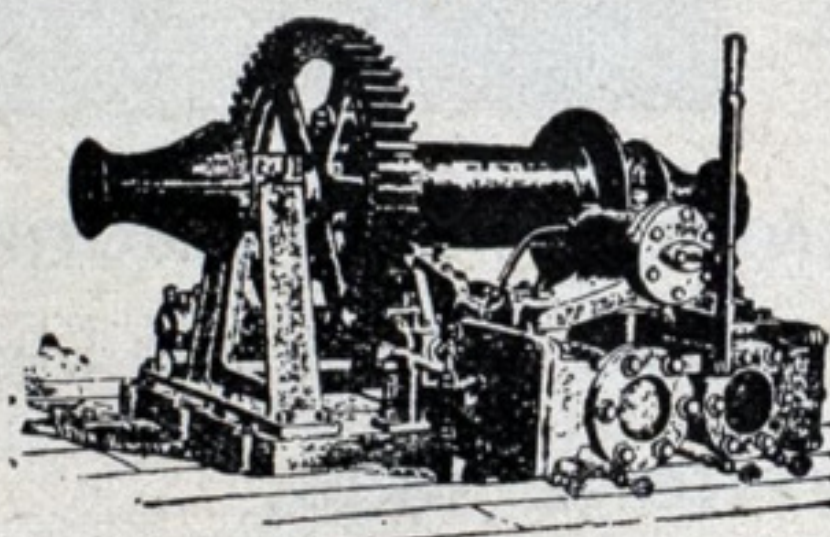
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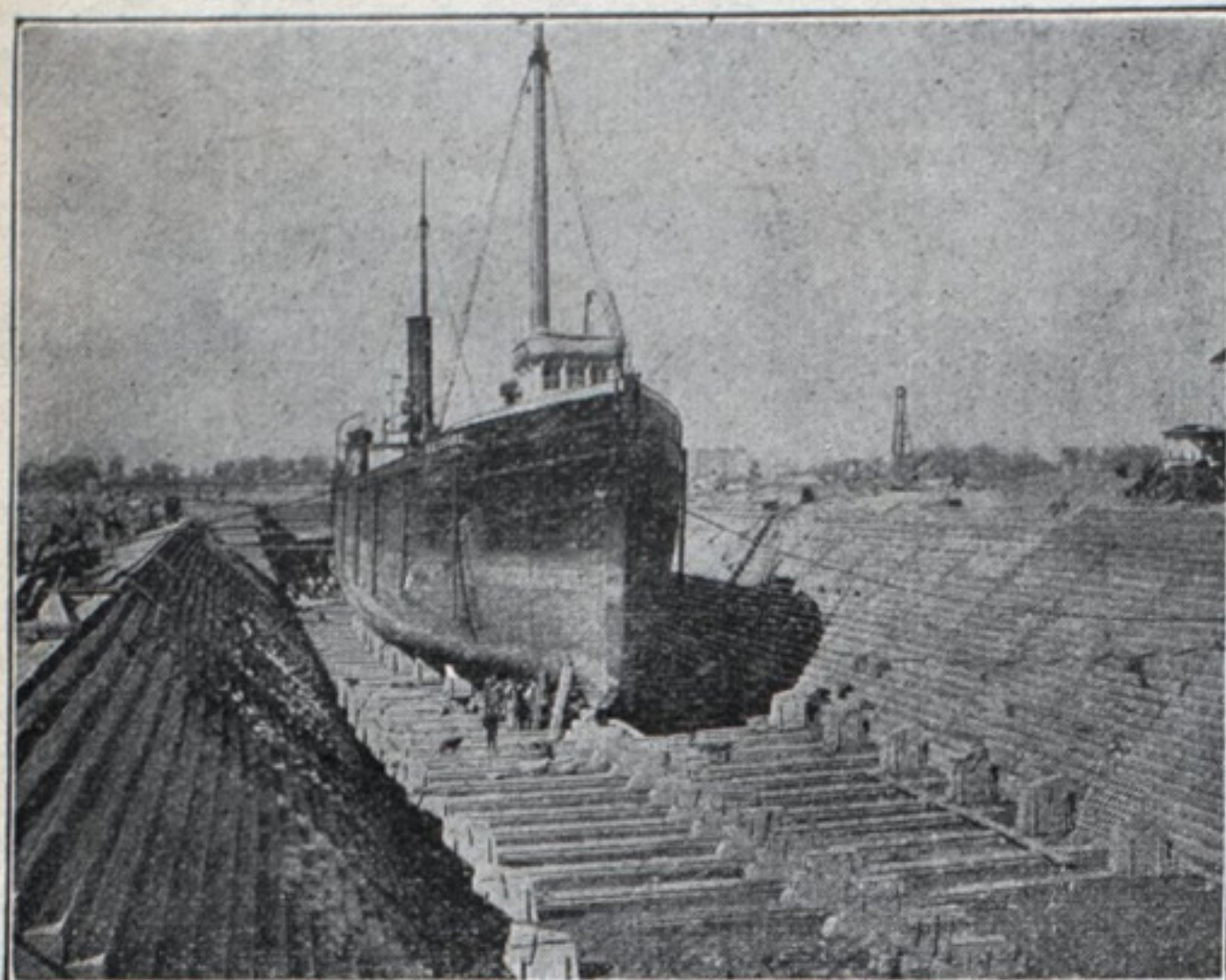
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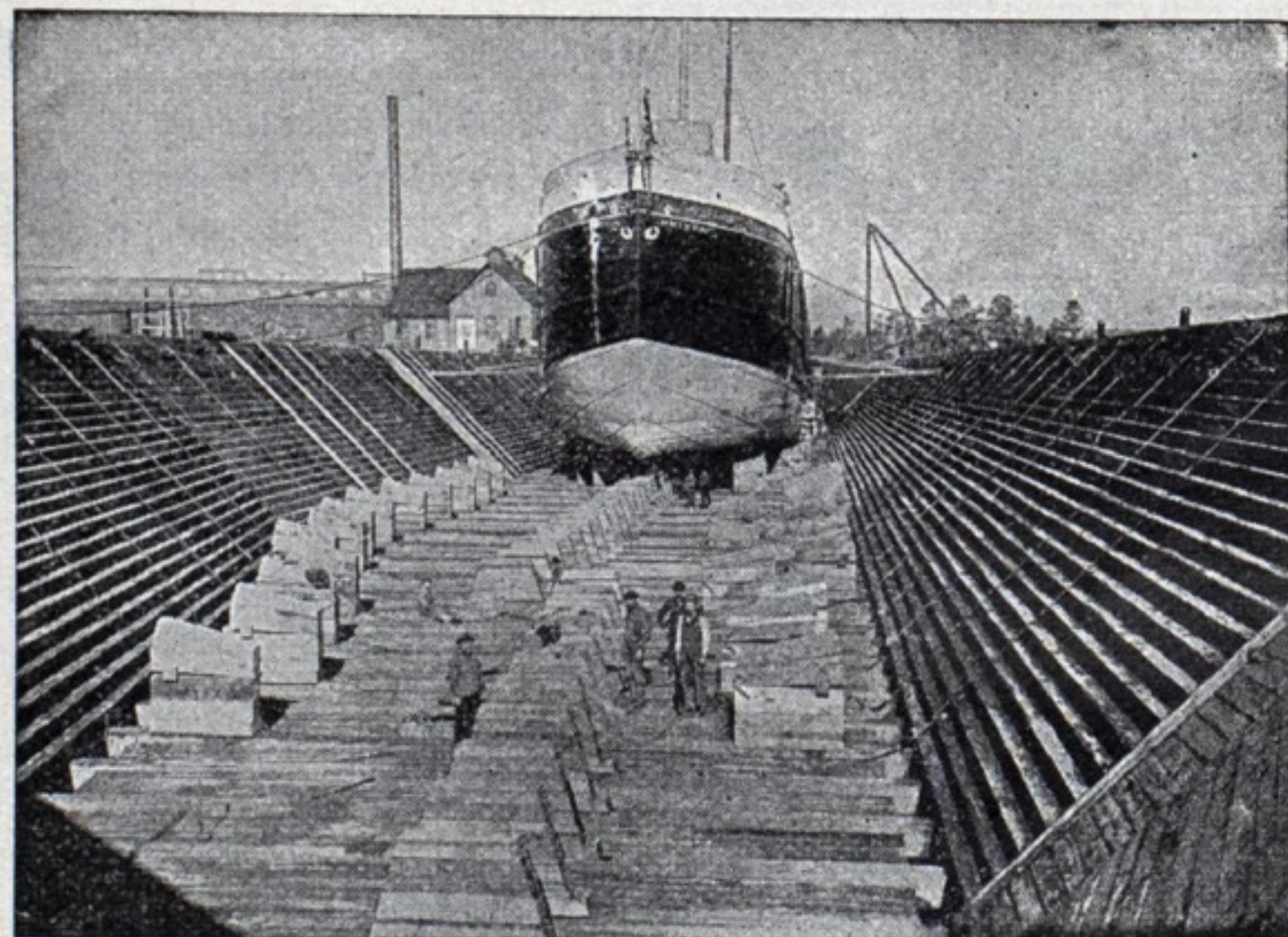
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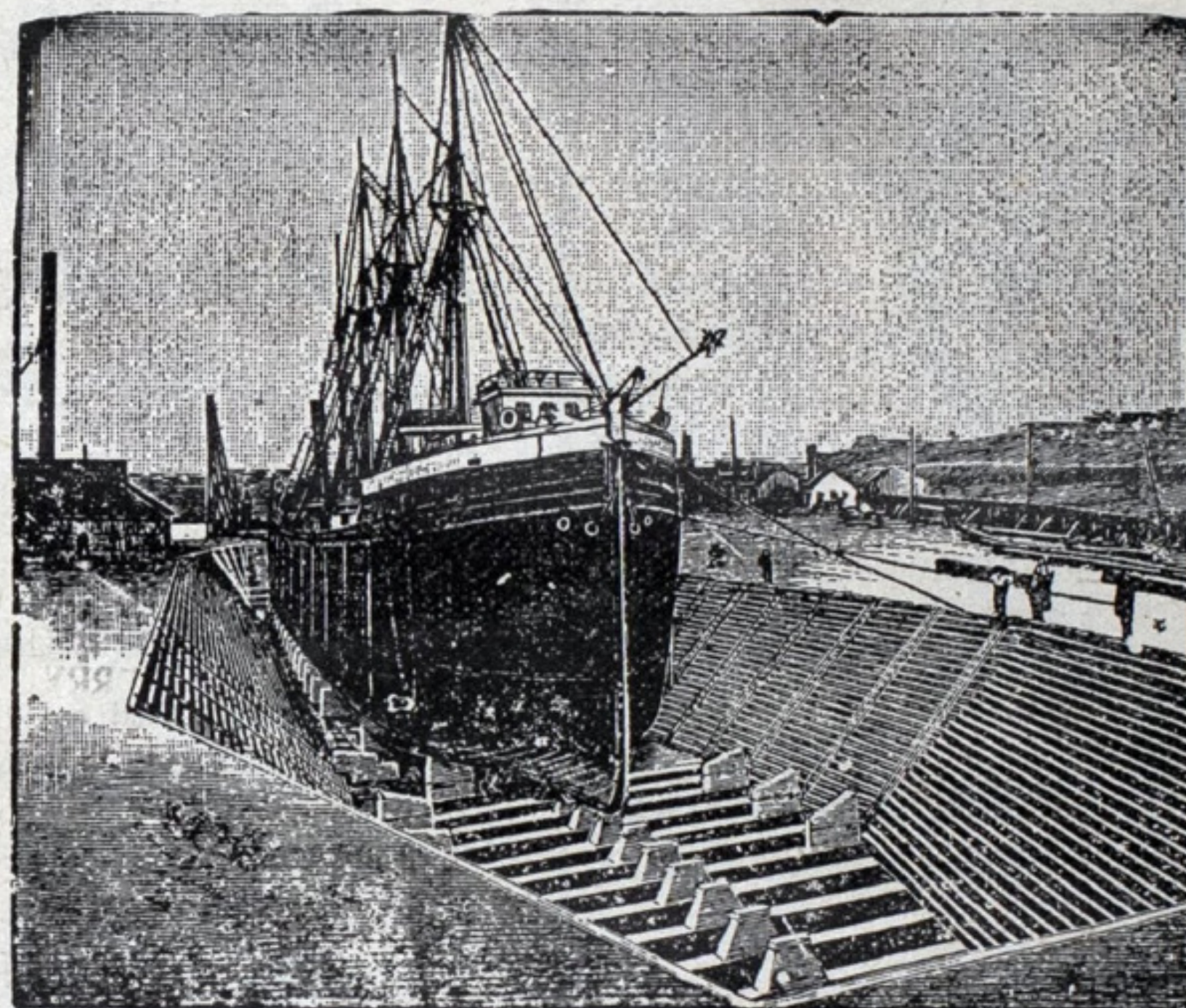
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CLEVELAND, O.